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ABSTRACT

This is the first of six reports on compensatory education services. The purpose of this report is to describe the compensatory education services provided by a cross section of the 14,000 school districts that receive Elementary Secondary Education Act Title I funds. It provides a factual background for the other reports in this series. This volume focuses on the actions of school districts, those ultimately responsible for identifying students in need and selecting and delivering services. These are some of the findings: Ninety per cent of America's school districts receive Title I funds. Title I services go primarily to elementary school students in public schools and 20% of the elementary school students in Title I districts receive compensatory education services. School districts exercise considerable flexibility in identifying students to receive Title I services. Because of limitations in Title I funding, few districts can serve all of the students judged to be in need. Because the needs of students vary from one school district to another, local educational agencies design and operate their own compensatory education programs. The quality of compensatory instructional services is reflected in the four factors of class size, time spent in instruction, teacher characteristics, and individualization. Variation among school districts in their compensatory instructional programs are strongly related to the size of the districts' Title I grants and to the staffing patterns they select. In contrast to the strong emphasis on compensatory instruction, auxiliary services represent a very small part of the overall Title I effort. Title I instructional services appear to make a distinct contribution to the learning experiences of students. (Author/AM)

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COMPENSATORY EDUCATION SERVICES

July 31, 1977

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PREFACE

The Compensatory Education Study on which this report is based was requested by Congress in the 1974 Elementary and Secondary Education Amendments. The 1974 Amendments emphasize the direct responsibility of the National Institute of Education (NIE) to the Congress. The study began in February of 1975 only after Congress had reviewed an official research plan submitted by NIE; it was funded with $15 million specially set aside from the Title I program appropriation. Results of the study will be reported directly to the President and to the Congress.

This direct responsibility to Congress led NIE to ensure that the study could be planned and integrated within the Institute. A special staff was established to conduct the study, and it was placed in NIE's Educational Equity Group. That staff has planned and closely managed the research on which this report is based and the 35 research projects that make up the whole compensatory education study.

The first three chapters of this report were written by Margot Nyitray of NIE, from data analyzed by herself and James Murray of Policy Research Corporation. Chapter IV was written by Iris Rotberg and Ann Milne, and Chapter V was written by Marjorie Kulash. Special recognition is due to James Harvey and Alison Wolf of NIE for their contributions to the integration and clarity of this report.

The research on which this report is based reflects the work of many members of the NIE staff and contractors. The National Survey of Compensatory Education, which is the source of data in the first three chapters, was planned at NIE and reflects the work of Margot Nyitray, Joy Frechtling, Paul Hill, and Iris Rotberg. The survey itself was conducted by the National Opinion Research Center, Stanford Research Institute, and Policy Research Corporation. Chapter IV relies on research supervised by Ann Milne of NIE and James Vanecko of Abt Associates, and the case studies for Chapter V were designed by Marjorie Kulash of NIE and Celia Homans and Pat Ward of the National Opinion Research Center.

The work of several other people outside NIE is reflected in this report. Chairman Owen Peagler of the National Advisory Council on the Education of Disadvantaged Children and the members and staff were generous with their time in advising on the execution of the study, as were a great number of educational agencies and associations at the Federal, state, and local levels. The staff of the U.S. Office of Education's Division for the Education of the Disadvantaged has been unfailingly open and helpful throughout the study.

Members of the NIE staff too numerous to mention have offered expert advice on research and helped select contractors. Special thanks are due Emerson Elliott, Harold Delaney, and Tommy Tomlinson for their suggestions and contributions to the study and this report.

Paul Hill, Director
NIE Compensatory Education Study

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SUMMARY

This is the first of six reports which the National Institute of Education (NIE) will publish in the summer and fall of 1977 in response to a mandate contained in the Elementary and Secondary Education Amendments (ESEA) of 1974. The purpose of this report is to describe the compensatory education services provided by a cross section of the 14,000 school districts that receive ESEA Title I funds. It provides a factual background for the other reports in this series, which include:

- An assessment of the present system for allocating ESEA Title I funds
- An analysis of the likely consequences of using student achievement test scores to allocate funds to States and school districts
- The results of demonstration projects in 13 school districts that are using new methods, featuring student achievement data, to allocate Title I funds among schools and students
- The results of a major new study on the effectiveness of selected aspects of compensatory instructional services
- An assessment of Federal and state administration of the Title I program

This volume focuses on the actions of school districts--those ultimately responsible for identifying students in need and selecting and delivering services.

Ninety percent of America's school districts receive Title I funds. Title I services go primarily to elementary school students in public schools, and 20% of the elementary school students in Title I districts receive compensatory education services. In contrast, less than 1% of the secondary school students in elementary and

secondary Title I districts receive Title I services. Less than 4% of private school students receive Title I services; in fact, only 43% of the Title I districts that contain private schools provide Title I services to private school students.

School districts exercise considerable flexibility in identifying students to receive Title I services. All districts serve students judged to be educationally disadvantaged, but their standards and ways of measuring need vary. Though all districts make some use of objective achievement tests, these examinations often cover only one grade. Thus, many students are selected to receive Title I services on the basis of teacher judgment, family income, or other criteria. Districts can establish their own criteria to establish Title I eligibility, so a student who would be eligible for compensatory education in one district may be ineligible in another.

Because of limitations in Title I funding, few districts can serve all of the students judged to be in need. Nationwide, approximately two-thirds of the students considered eligible according to district criteria are actually served. Some States complement Title I by funding their own compensatory education programs, and school districts in these States are often able to serve all of the needy students in their Title I schools.

Nationwide, 54% of the students who receive compensatory education are white, compared with 75% white enrollment overall. Forty-six percent belong to minority groups, compared with overall minority enrollment of 25%.

Because the needs of students vary from one school district to another, local educational agencies (LEAs) design and operate their own compensatory education programs. All LEAs use their Title I funds to support instructional services, and about half the school districts provide some auxiliary noninstructional services.

Compensatory instructional services clearly emphasize the basic skills areas of reading, language arts, and mathematics. Eighty-five percent of all compensatory education students receive compensatory instruction in reading or language arts, and 44% receive compensatory instruction in mathematics.

The quality of compensatory instructional services is reflected in the four factors of class size, time spent in instruction, teacher characteristics, and individualization. Although there is considerable variation among school districts, compensatory services overall appear to be special in each of four respects:

- Class sizes are small. They average 9 students in compensatory reading and 12 in mathematics and language arts, compared with 27 in homeroom classes.

- Compensatory education students spend an average of 5½ hours per week in special instruction. That amounts to 29% of total instructional time for students in reading, 22% for students in language arts, and 27% for those in mathematics.

- Professional teachers who deliver compensatory instruction are often highly qualified: 67% have graduate training beyond a bachelor's degree, and 62% specialize in teaching one subject. Teachers' aides deliver a substantial portion of compensatory instruction. More than half the aides employed nationwide are paid from Title I funds.

- Many school districts attempt to individualize their instruction, although few districts offer instruction that could be considered individualized in all respects.

Many students are taken out of their regular classrooms to receive compensatory instruction. Seventy-five percent of the children in compensatory reading programs are pulled out of their regular classrooms, while somewhat smaller proportions are pulled out for language arts (41%) and mathematics (44%). Though they often miss instruction in their regular classrooms, these students generally receive instruction from subject area specialists in the pullout setting.

Pullout instruction removes compensatory education students, at least temporarily, from the company of classmates who do not receive compensatory services. While most compensatory students belong to "mixed" homerooms, 24% of

these students receive all of their instruction in groups composed entirely of students who receive compensatory services.

Variations among school districts in their compensatory instructional programs are strongly related to the size of the districts' Title I grants and to the staffing patterns they select. As Title I expenditures increase, districts serve more students in all areas of compensatory instruction and also rely more heavily on pullout programs. District differences in selecting compensatory education teachers are also strongly related to the quantity of compensatory services they provide in different instructional areas. For example, districts which hire relatively large numbers of aides and teachers with master's degrees emphasize participation in pullout reading programs.

Title I instructional services appear to make a distinct contribution to the learning experiences of students. NIE obtained data on the reading and language arts instruction received by Title I and non-Title I students in 12 school districts. Title I students in every district received extra services--either more time in instruction, smaller group size, or more time with highly qualified teachers. Few districts make the instruction for Title I children equally distinctive in all respects; for example, not all districts provide additional instructional time or specially trained staff.

In contrast to the strong emphasis on compensatory instruction, auxiliary services represent a very small part of the overall Title I effort. Nationally, an average 4% of the Title I budget was spent on auxiliary services, and only a few districts devote more than 10% of their Title I budget to auxiliary services. Parent involvement activities, including parent advisory councils, now account for the largest expenditures for auxiliary services. These expenditures have increased in recent years, while spending for libraries, health services, counseling, transportation, and overall auxiliary services has fallen.

The decline in spending on auxiliary services is due to several factors. Many school districts have responded to the emphasis that their States and the U.S. Office of Education have placed on basic skills instruction. Others have reduced auxiliary services because they feared that compliance reviewers would conclude that Title I funds were replacing local or state funds which normally support such services. The

decline in spending for auxiliary services has apparently reduced the real level of such services available to compensatory education students. School district budgets pick up some, but not all, of the slack left by the withdrawal of Title I funds. Though some school district personnel regret the decline in auxiliary services, most believe that they should be supported by state and local funds. Few expect that the scale of such services would grow even if their overall Title I budgets were substantially increased.

THE NIE COMPENSATORY EDUCATION STUDY

REQUEST FOR THE STUDY

The Education Amendments of 1974 (Public Law 93-380), the major education legislation of the 93rd Congress, extended and changed the Elementary and Secondary Education Act (ESEA) of 1965 and extended other Federal education programs, including the Education of the Handicapped Act and the Adult Education Act, as well as the impact aid, Indian education, and emergency school aid programs.

The law also directed various Federal agencies to conduct studies and surveys so that Congress might have the benefit of more up-to-date and accurate information during its future consideration of legislation to assist elementary and secondary education. Among these directives is Section 821 of the Education Amendments, which instructs the National Institute of Education (NIE) to conduct a study of compensatory education, including compensatory programs financed by States and those funded under authority of ESEA Title I.

Compensatory education includes a number of Federal and state programs in addition to ESEA Title I. The relative size, scope, and long history of Title I mark it as the most important of the compensatory education programs. In order to ensure adequate depth and scope for the study, NIE chose to focus most of its attention on Title I. In 1977, that title, the largest Federal education effort at the elementary and secondary level, provided over $2 billion, most of which was used to fund educational programs for low-achieving students in school districts serving children from low-income families.

Specifically, Section 821 instructs the Institute to conduct a study incorporating:

- An examination of the fundamental purposes and effectiveness of compensatory education programs

- An analysis of the ways of identifying children in greatest need of compensatory education

- An exploration of alternative ways of meeting these children's needs, including the use of written educational plans

- An examination of the feasibility, cost, and consequences of alternative ways of distributing Federal compensatory education funds

- Not more than 20 experimental programs for the purpose of examining the issues above

The relevant sections of the 1974 statute authorizing the study are reproduced in Appendix A.

Section 821 also directs the Presidentially appointed National Advisory Council on the Education of Disadvantaged Children to advise the Institute on the design and execution of the study.

Finally, the law, as amended by Public Law 94-482, requires NIE to submit interim reports to the President and Congress on December 31, 1976, and on September 30, 1977, and to submit a final report in September 1978.

LEGISLATIVE BACKGROUND

The breadth of the examination of compensatory education requested of NIE, ranging from the allocation of funds to specific instructional approaches, reflects a number of concerns which figured prominently during the 1974 Congressional consideration of the extension of ESEA Title I. Among these concerns were:

- The effects of altering the definition of poverty used in the Title I allocation formula

- The feasibility of using measures of student achievement rather than numbers of low-income children in the formula

- The possibility of requiring individualized programs of instruction for each student participating in a Title I program

- The merits of requiring school districts to spend as much as 85% of their Title I grants on basic skills instruction in reading and mathematics

- The relatively narrow focus of most prior efforts to evaluate the effectiveness of Title I

RESEARCH STRATEGY

Like the provisions which authorized the study, therefore, NIE's evaluation adopted a wide focus during its examination of compensatory education. Essentially, the Institute has interpreted the provisions of Section 821 as constituting two major requests from Congress. The first requires an assessment of the effectiveness of compensatory education programs in meeting their fundamental purposes; the second requires an examination of several alternatives which might improve the effectiveness of compensatory education programs.

In response to these requests, NIE developed a strategy designed to produce a complete understanding of how the Title I program operates in practice as well as how it might change if any of several alternatives were adopted. The strategy involved the examination of four major areas:

- Funds allocation

- Service delivery

- Student development

- Program administration

The study defined the first three of these areas as the "fundamental purposes" of Title I. The fourth was examined in order to determine how the administrative structure required to implement such a large education program promotes the achievement of the program's purposes as well as how program administration might be improved.

FUNDAMENTAL PURPOSES

To examine the fundamental purposes of compensatory education programs, it is necessary to distinguish the broad philosophical concerns that may have motivated the program's originators from the more concrete operational purposes that are built into the program.

The originators of compensatory education efforts, such as Title I, may have had in mind some very general objectives, including helping to eliminate poverty, contributing to the redistribution of wealth and opportunity, reforming education, and symbolizing society's commitment to helping the disadvantaged. Although it is possible to speculate about what their motivations might have been, the debates, statutes, and official legislative reports that established the program contain a specific set of fundamental purposes, which were described in some detail in the Institute's December 1976 publication, Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study. These purposes, clearly discernible in the statute and accompanying formal Congressional statements, are:

(1) To provide financial assistance to school districts in relation to their numbers of low-income children and within those districts to the schools with the greatest numbers of low-income students

(2) To fund special services for low-achieving children in the poorest schools

(3) To contribute to the cognitive, emotional, social, or physical development of participating students

These three goals of Title I are consistent with one another, but each is not equally important to all Members of Congress. Congressional debates, and even the language of different parts of committee and conference reports, suggest that Members of Congress differ among themselves about the relative importance of the respective purposes. Some Congressional statements imply that the purposes form a hierarchy in which Title I delivers funds and provides services only to increase children's academic achievement (thus making the third the most important). Other statements, however, make it clear that the allocation of funds and delivery of services are important ends in themselves and may, in fact, define the practical limits of Federal action to promote the development of children.

STRATEGY FOR ASSESSING COMPENSATORY EDUCATION

The evaluation of Title I must start from the recognition that the program has several goals, and to focus exclusively on one, improperly ignores the others. Evaluation must also acknowledge that Title I operates through the Federal system and that state and local governments determine what it will be in practice. Although there is only one Federal Title I program, i.e., only one basic framework of laws and policies, it operates differently in every State, in 14,000 school districts, and in countless classrooms. Thus, to understand and evaluate Title I it is necessary to consider the ways in which Federal policy interacts with the actions of States and local educational agencies (LEAs) that actually implement the program.

The early national evaluations of Title I considered only the third goal--contributing to children's development--and often rendered judgments on the efficacy of the program without accounting for the diverse ways in which LEAs had implemented it. Those evaluations overlooked some important truths about Title I: it has several objectives, and under it LEAs deliver a range of services with a variety of aims and emphases to a diverse set of beneficiaries. In contrast to earlier evaluations, therefore, NIE's strategy is designed to (1) provide clear information about what Title I is accomplishing toward achievement of each fundamental purpose and (2) examine the implications of alternative ways of organizing the efforts of the Federal, state, and local governments to achieve these purposes.

THE REPORT

This volume is one of several intended to comply with the statutory requirement that a second interim report be completed not later than September 30, 1977. It presents NIE's findings on the extent to which compensatory education is fulfilling its second fundamental purpose--the provision of educational services. The report describes how the NIE Compensatory Education Study formulated the research issues, describes the studies commissioned by NIE, and reports findings and conclusions on compensatory education services.

Five additional reports will be published in September on the following topics:

- The effects of using counts of low-income children in allocating funds
- The feasibility, costs, and consequences of using counts of low-achieving children in allocating Title I funds to school districts
- The effects of using student achievement to allocate funds within school districts
- Student development in compensatory programs
- Administration of compensatory education

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CHAPTER I. EVALUATING COMPENSATORY EDUCATION SERVICES

OBJECTIVES OF THIS REPORT

One of the basic purposes of compensatory education is to provide improved services to children with special educational needs. Under Title I, the Federal Government does not deliver these services directly. Instead it channels funds to local educational agencies (LEAs), which are responsible for implementing the program. In providing these compensatory services with Title I funds, school district officials must make a number of important decisions affecting the scope and nature of the program. They must select recipients, choose the kind of services to be provided, and determine appropriate personnel and procedures for delivering these services, with a given level of resources and funds.

Because very little reliable information on these processes was available at the outset of this study, one of the first projects commissioned by the National Institute of Education (NIE) was a National Survey which collected information on Title I and state compensatory education services delivered by school districts. Additional case studies were carried out in a number of survey districts.

This research was designed to address the following issues:

- How are the children who need compensatory services identified, and who is selected to receive these services?
- What are the special characteristics of the compensatory instruction that is provided?
- What are the characteristics of the auxiliary services that are provided?

Selection Procedures and Recipients

Title I funds are intended to provide compensatory education services for low-achieving children within schools serving areas with large numbers of poor children. Regulations specify fairly clearly the steps involved in reaching that goal. Based on a general assessment of student needs, districts may initially decide on the programs to be funded and the grade levels to be served. Then, having selected Title I schools on the basis of poverty, districts are required to identify children eligible for services because of educational needs. Finally, they must select, from among those eligible, those students in greatest need of assistance and provide them with compensatory services. Many low-achieving children do not receive services either because they are in non-Title I schools or unserved grades, or because they are not selected from the program eligibles to receive services.

Because districts may use different criteria to select schools and grades and to identify program eligibles and participants, there are likely to be variations in the size and characteristics of the participant group. Thus, to understand what Title I is in practice, NIE's research investigated the selection procedures actually used by Title I districts and the characteristics of the recipients.

Special Characteristics of Compensatory Instruction

Under Title I, districts are also responsible for deciding what kinds of compensatory instructional programs are best suited to their children's needs. In examining the compensatory instruction funded by school districts, NIE has focused upon five characteristics: amount of instructional time, class and instructional group size, teacher qualifications and characteristics, selected aspects of individualized instruction, and location of instruction. The first four were examined as indicators of the extent to which compensatory programs provide special services to participating children. The fifth, location of instruction, refers to whether participating children are provided compensatory instruction in the regular classroom or apart from other students. It was examined to determine the extent to which educationally disadvantaged children are separated from their classmates as well as the possible consequences of the practice.

Characteristics of Auxiliary Services

Because Title I provides services to students in low-income areas, some districts provide auxiliary services such as health or counseling, as well as instructional services. However, recent legislative proposals would have required that most Titie I funds be used for basic skills instruction. Very little is known about the nature of auxiliary services since they have been largely ignored in previous studies. NIE's research, therefore, includes a description of auxiliary services and how districts decide which services to offer, as well as the extent to which auxiliary services provided with Title I funds differ from those given to students through local funds.

DESCRIBING COMPENSATORY EDUCATION SERVICES

The Lack of Information on Compensatory Education Services

When the NIE Compensatory Education Study was initiated, no current, nationally representative data on the participants, the services offered to them, or the costs associated with compensatory education projects and programs were available to answer the questions posed above. In the past, the two basic sources of national information about Title I participants and services were the state annual reports required in the Elementary and Secondary Education Act (ESEA) and a series of annual surveys intended as Title I evaluations. The Title I legislation included a requirement for a three-tiered reporting system. Each local school district was to assemble data on its Title I programs and submit a report to its state department of education. The state education agencies (SEAs) in turn were to compile the information into a report that the U.S. Office of Education (OE) would use to prepare a report to Congress on the national picture.

There are, however, serious problems in using state reports to describe Title I nationally. An early review of these state reports (Wargo et al., 1972) revealed that the inadequacy of the information contained in the annual reports precluded their being used as sources of "nationally representative" data on participants and services. Reporting formats varied so much among States that, for example, in reporting the characteristics of the population served by compensatory funds, only 14 States

provided data uniform enough to be aggregated. Even a national estimate of the number of participants is difficult to obtain from these reports because some States counted students each time they received a particular service. Thus, these States inflated the estimated total of participants, since some students receive multiple services. Cost information also was not sufficiently standardized to permit aggregation, because the reports frequently did not indicate whether the information was based on actual expenditures, planned expenditures, or allocations.[1] Finally, the nature of services delivered is described in these reports only in the most general terms, reading versus mathematics instruction, for example. No report is made of the instructional techniques used or the location of the instructional programs. A more recent study (Gamel et al., 1975), which reviewed state reports through 1975, found little improvement in the quality of information they provided. Therefore, the state reports could not be used as the basis for NIE's research on compensatory services delivered by school districts.

The other source of descriptive information on Title I services is a series of evaluation studies implemented separately from the state reports and necessitated in part by the problems in these reports. These studies, which vary considerably in the extent to which they claim to provide a national description of Title I services, include assessments by independent groups; early national evaluations; and some more recent, narrowly focused evaluation studies. A detailed synthesis of both these studies and reviews based on state reports has been prepared as part of the NIE Study (McLaughlin, 1977).

Assessments by Independent Groups.--One of the earliest evaluations of Title I was Title I of ESEA: Is It Helping Poor Children? (Martin and McClure, 1969), written by the Children's Defense Fund and the National Association for the Advancement of Colored People (NAACP). It had considerable impact on the formulation of regulations for Title I service delivery. Unlike many of the larger scale evaluations of Title I conducted by OE, the study was designed not to measure achievement score outcomes but to describe the services delivered to Title I children. The report was highly critical of the Title I program as it existed in its first 4 years. The authors found that

[1] In fact, in any one year, up to one-third of the States did not report cost information at all.

the funds were not reaching the majority of eligible children, that services were not concentrated on the children most in need, that funds were spent on equipment and materials rather than on educational services, and that parents were not sufficiently involved in the programs in which their children participated. Largely as a result of this study, regulations on how Title I funds could be spent were strengthened in an attempt to ensure that compensatory funds reached the intended target group and that they were truly supplementary. It should be noted that, while this study made some attempt to look at school districts in different parts of the country, it was not a nationally representative sample. Instead, it involved informal visits to 28 school districts, many of which came to the attention of the NAACP because of complaints about their use of Title I funds. The extent to which the study results were indeed representative of services delivered in the Nation's Title I school districts is not known.

Early National Evaluations.--For a national picture of compensatory education services prior to 1976, one must turn to the Compensatory Education Surveys funded by OE. The national surveys, conducted annually from 1968 to 1971, were developed to identify the impact on student achievement of all Title I services; documenting the characteristics of services per se was not an objective. Two problems arose as a consequence of this focus on measuring the relationship between Title I and student achievement at the national level. First, in order to provide summary measures of the effects of Title I on achievement, the variability in delivery of services had to be ignored. Second, the request for achievement data confronted the reluctance or inability of school districts to provide it. Usable achievement data were obtained for less than 10% of the sample. Because of this lack of achievement data, the surveys were viewed as failures by the sponsors. As a result, the analysis of the first survey was not reported until 1970; the 1969 survey analysis was never released; the 1970 results consist of 1,200 tables which were never interpreted; and the 1971 data were never analyzed.

In 1969, the Belmont program--a joint Federal/state reporting, management, and evaluation system--was established. In addition to the national surveys described above, which were incorporated into Belmont, the system also included the Consolidated Program Information Report (CPIR), intended to provide national data on

a series of Federal education programs, including Title I. To reduce the burden on school districts, this form collects only minimal information on participants, services, and expenditures for any one program. These data have problems similar to data included in state reports (McLaughlin, 1977). The most recent information published by the National Center for Educational Statistics (NCES), which now operates Belmont, is for the 1972-73 school year.

Focused Evaluations.--Because these early efforts failed to provide national data on the effects of Title I services on student achievement, recent studies have taken a more selective approach and have collected information only on programs intended to have an impact on achievement outcomes. This practice, however, limits the usefulness of the findings of these studies as a description of the general characteristics of Title I services, since not all the programs are instructional. A case in point is the recently completed study of Title I reading programs conducted by the Educational Testing Service (Mayeske, 1976). The data, collected in 1973-74, reflect Title I reading services only; since other services were not surveyed, the study did not produce a representative description of the national use of Title I funds. Another recent study (General Accounting Office, 1975) also focuses on reading programs; it makes no claim that its findings are typical of all Title I programs, or even of all reading programs, since only 15 school districts were studied.

DESIGN OF THE NIE NATIONAL SURVEY OF COMPENSATORY EDUCATION

The NIE National Survey of Compensatory Education provides a comprehensive picture of services provided by school districts with Title I and state compensatory education funds. The survey collected information on the services delivered under the rubric of compensatory education; what the recipients of these services are like and how they are selected; and how the services are planned, delivered, and evaluated by the school districts receiving compensatory education funds. It was thus designed to allow the NIE Study to consider the issues discussed above.

One of the important aspects of the survey design is the sampling strategy that was employed. The population to be sampled was defined as all operating public school districts in the continental United States that received Title I funds and that had at

least one grade in the range K-8.[2] Many earlier evaluations sampled Title I schools throughout the country. The NIE Survey is based on a sample of 100 Title I school districts because districts are the local policymaking unit to which Federal funds are directed. The districts provide a representative sample in terms of enrollment, regional location, and receipt of state compensatory education funding.[3]

The sample was selected in order to permit estimates from the data on both a per-district and a per-pupil basis and to ensure approximately equal reliability for both types of estimates.[4] One hundred school districts were selected on this basis, after which individuals to be interviewed within those districts were selected. In order to confirm details of the services, information was collected not only from those responsible for designing programs at the district level, but also from those responsible for implementation: principals and teachers. Interviews were thus conducted with a number of different persons within each of the sample districts: district administrators, principals, and Parent Advisory Council (PAC) chairpersons, as well as teachers--over 5,000 individuals in all. Although some public records and documents on compensatory education services and participants were collected, most of the data were gathered through face-to-face interviews ranging in duration from 30 minutes to 2½ hours.[5]

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[2] Of the 15,453 school districts in the continental United States serving some elementary (K-8) grades in 1975-76, Title I funds were distributed to 13,877, or 90%, of these districts (information from NIE Survey sampling frame).

[3] Three enrollment or size categories were established with cutting points at the 33.3 and 66.6 percentiles of number of students: Category 1--lowest third, enrollment less than 4,359; Category 2--middle third, enrollment from 4,359 through 17,628; and Category 3--highest third, enrollment above 17,628. For regional location, four categories, based on Census Bureau definitions, were used: Northeast, South, North Central, and West. The two categories under state compensatory education funding for the district were (1) presence of state compensatory education funds and (2) absence of state compensatory funds. States with such programs include California, Connecticut, Georgia, Hawaii, Maryland, Michigan, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Utah, Washington, and Wisconsin.

[4] In technical terms, the probabilities of selection of districts for the sample were chosen as a compromise between the extremes of equal probability and probabilities proportional to size.

[5] The cooperation that the interviewers received from all these people deserves recognition here. The completion rate for interviews was 99.4%. It is only due to the continuing cooperation of the 100 sample districts, which were promised that their participation in the survey would not be revealed, that the NIE Compensatory Education Study is able to provide the information on compensatory services contained here.

Within districts, two samples of teachers were selected. First, to obtain accurate estimates of the number and characteristics of students receiving compensatory services, a sample of homeroom teachers was selected from among all teachers who had responsibility for taking attendance and who had at least one such student in the classroom. In this way, duplicate counting was avoided because no two teachers in the homeroom sample could report on the same pupil when asked about the number of compensatory education students. Second, lists were compiled of all teachers who provided Title I- and/or state-funded compensatory instruction. The teachers providing this special instruction may or may not have also been homeroom teachers. A separate sample of these teachers was then selected. Interviews with these compensatory education teachers provide descriptions of the characteristics of the instructional services delivered to compensatory education students.

In addition, case studies were conducted in 18 of the sample districts in order to gather information on the auxiliary services supported with Title I funds. The case studies were specifically designed to examine district rationales for this use of Title I funds, the characteristics of the auxiliary services provided, and how these services differed from auxiliary services provided with local funds. The information was collected through indepth conversations with district personnel involved with these Title I services. The 18 sites were selected from the larger representative sample, in order to include districts varying in enrollment, incidence of poverty, regional location, and size of Title I grant. These districts also offered varying types and combinations of auxiliary services.

The following chapters in this report present the findings of the NIE National Survey of Compensatory Education with respect to the provision of compensatory education services. The information consists of national estimates about compensatory education services based on the survey data. Preliminary findings from the survey, presented in Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study (December 1976), are also summarized here.

In the following discussion, the terms "Title I" and "compensatory education" are not interchangeable. Statements about Title I refer only to programs supported with those funds. References to compensatory education are to both Title I and state compensatory programs.

CHAPTER II. SELECTION PROCEDURES AND RECIPIENTS

SELECTION PROCEDURES

School districts have considerable flexibility in the procedures used to select recipients of compensatory education services, and the methods they choose affect the numbers and kinds of pupils served. In order to understand how districts use this flexibility, the National Survey examined the ways in which districts determine eligibility and select participating students, and analyzed the proportions of eligible students served.

Under Title I, the term "eligibility" means different things at different levels of the system. A district receives Title I funds based on its number of "formula eligibles," that is, a count of low-income children within its boundaries. Within a Title I district, a school is eligible for funds based on the number or proportion of low-income children residing in its attendance area. Any school above the district average is eligible. At the student level, however, the basic eligibility criterion is educational. Children in Title I schools who are low achievers are eligible for Title I programs.

Kinds of Measures Used

All Title I districts use standardized achievement test scores to determine eligibility for Title I services. However, district testing programs are usually focused on only one or two grades, whereas compensatory programs may be offered in as many as six grade levels. Thus, 89% of Title I districts also use teacher judgment to identify those low-achieving students for whom test scores are unavailable. In addition, a smaller percentage of Title I districts identify additional eligible students based on economic criteria or other procedures such as referral by outside agencies.[1] Even when

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[1] Of the Title I districts, 36% also use economic criteria, while 26% use other procedures in addition to test scores.

standardized tests are used to determine eligibility, the cutoff varies from district to district depending on whether national or local norms are used and whether the district considers all students below the 50th percentile to be low achievers, or uses some other percentile to define low achievement.

Once program-eligible students in Title I schools have been identified, the final step is the selection of students from among those eligible to receive services. About half the districts specify a second percentile lower than that used to determine program eligibility and select all students at or below this level. Again, the cutoffs vary considerably from district to district. The rest of the districts rely on more informal procedures. Teachers, for example, may select participants from among those identified as needing services; or students whose schedules do not conflict with the compensatory instruction schedule may be selected. The criteria used for selecting participants vary even more than those used to determine eligibility.

Proportion of Program Eligibles Served

The NIE Survey did not collect information that allowed direct calculation of the proportion of all low-income or low-achieving children who receive Title I services. These calculations require information on an individual student's economic status, achievement test scores, and Title I participation. A forthcoming report from the Secretary of the Department of Health, Education, and Welfare (HEW) will provide information from a study designed to provide those figures (Systems Development Corporation, 1976).

However, the survey did show that the number of children designated as eligible for Title I services is approximately one-half the number of children who are counted as poor for the purposes of allocating funds to districts.[2] The figure for Title I eligibles was derived from principals' estimates of the numbers of students needing compensatory education services, according to the criteria used in their schools. These

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[2]The ratio of the number of program eligibles to low-income children is .53. The standard error of the estimate is .04. This means the actual ratio falls within a range of .04 above or below this estimate. All standard errors for data in this report are for estimates at the 95% confidence level.

figures do not indicate that one-half of the low-income population is low-achieving; eligibility figures refer to all low-achieving children, regardless of income, in Title I schools.

The National Survey also provided data with which to calculate "participation rates," that is, estimates of the number of participants as a percentage of the number of students identified as eligible. An average participation rate of 57% was noted in NIE's December 1976 Interim Report. That figure represents the average of the separate participation in Title I districts.[3] A more reliable estimate of the national participation rate has now been calculated from survey estimates of the total number of Title I participants in the country and the total number of Title I eligibles. This procedure produces a national estimate that the number of students receiving Title I services is 66% of the number of program eligibles in Title I schools.[4] Therefore some students whom districts have identified as needing Title I services are not receiving them.

If districts received more funds, they could choose to increase expenditures on current participants or to serve more students. Survey data suggest that with a higher level of funding, districts would choose the latter option. This can be inferred from the fact that the more Title I funds a district receives, the more students it serves. In fact, on average, an increase in the amount of funds leads to a roughly proportional increase in the number of students served.

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[3] When separate district participation rates are averaged, the participation rates of small districts influence the average as much as the participation rates of large districts.

[4] Standard error = .05.

In addition, the more funds a district receives, the more students in Title I schools are identified as eligible for services.[5] In part, this may be due to the flexibility allowed districts in their definitions of educational need. Because districts are free to adopt more or less stringent definitions of eligibility, districts receiving more funds can adopt a broader definition of need and thus consider a larger number of students eligible for programs.

The survey data were also used to investigate whether differences in district participation rates are related to differences in other district characteristics. The analysis indicates that participation rates do not significantly vary in districts of different size, regional location, or socioeconomic characteristics. However, Title I districts that also receive state compensatory education funds do serve a higher proportion of eligibles than those who do not, as Table I indicates.

TABLE I

AVERAGE PARTICIPATION RATES IN TITLE I DISTRICTS

	With State CE Funds	Without State CE Funds
Percentage of eligibles in Title I programs based on principals' estimates	75%	62%
Percentage of eligibles in compensatory programs based on teachers' counts of participants	105%*	63%

*This figure represents the number of children in Title I or state programs expressed as a percentage of Title I eligibles.

[5] Generally, an increase of 1% in the amount of Title I funds leads to a .8% increase in the number of participants, while a 1% increase in Title I funds is associated with a .5% increase in the number of program eligibles.

In districts that receive state compensatory education funding, principals' estimates indicate that the number of students participating in Title I programs is 75% of the number determined eligible, compared with 62% in Title I districts that do not receive state compensatory funds. The Title I participation rate is higher in districts with state compensatory funds because Title I schools in these districts frequently use these state funds to expand the Title I instructional program. A second participation rate, based on classroom counts of compensatory education students, was also calculated for these districts. This rate is also higher in districts that receive state compensatory education funds because state funds are used for separate programs in Title I schools, and participants in state programs are included in the counts of compensatory education participants. The number of these participants is essentially the same as the number of eligibles in these districts.

RECIPIENTS

The survey provides information on the numbers and racial characteristics of public school students receiving compensatory services as a result of these selection procedures. Since Title I funds have always been intended to reach eligible pupils in nonpublic as well as public schools, the survey also gathered some information on how districts identify nonpublic school participants, on how many are served, and on the compensatory services provided to them.

Public School Students

During the 1975-76 school year, approximately 5.9 million public elementary school students in Title I districts received compensatory education services in Title I or state programs.[6]

This figure represents 19.5% of public elementary school enrollment in the country. Compensatory education students are concentrated in grades 1-6, with significantly lower percentages in kindergarten and junior high school grades 7 and 8.[7]

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[6] Standard error = 595,000.

[7] See Figure B-1 (Appendix B) for grade distribution of compensatory education students and total enrollment.

Few school districts provide compensatory services to high school students. In Title I districts with both elementary and secondary schools, an estimated 121,513 of the high school (grades 9-12) students, or 1% of enrollment in these grades, received Title I-funded compensatory education services.[8]

Table 2 presents the racial and ethnic distribution of total enrollment in Title I districts and of compensatory education students in these districts. The concentration of minority group children is significantly higher among those receiving compensatory services than in Title I districts as a whole. Of the compensatory education students, 34% are black, compared with 19% of total enrollment; 10% are Spanish surnamed, compared with 5% of total enrollment; and 54% are white, compared with 75% of total enrollment.

TABLE 2

RACIAL/ETHNIC COMPOSITION OF TITLE I DISTRICTS

	Percent				
	White	Black	Spanish Surnamed	American Indian	Asian/ Pacific Islander
Total enrollment	74.8	19.5	4.8	0.3	0.5
CE students	54.0	34.5	9.8	0.8	0.8
	Percent Standard Error				
Total enrollment	4.83	4.17	1.22	0.11	0.09
CE students	5.82	5.84	2.19	0.40	0.20

[8]Note that the universe of districts from which the sample for the survey was selected did not include approximately 800 districts in the country that have only high schools. Therefore, the survey data cannot be used to estimate the percentage of all high school students in the country who receive Title I services.

Nonpublic School Students

Many school districts apparently have difficulty in delivering compensatory services to nonpublic school children. These difficulties may be due to reluctance to let funds leave the public system or to problems in identifying Title I-eligible students in private schools and organizing special programs for them. The problems encountered are illustrated by the fact that only 43% of Title I districts with nonpublic school students are providing Title I services to any of these pupils.[9]

Title I-funded compensatory services are provided to 116, 218 nonpublic school students. This represents an estimated 4% of the nonpublic school students living in Title I districts. These participants are usually selected by the nonpublic schools, and Title I resources are then used to provide some compensatory instruction within these schools. Participating nonpublic school pupils receive an average of approximately 1 hour per week of compensatory instruction.

[9] A forthcoming report of the NIE Compensatory Education Study will describe in greater detail the methods used to provide Title I services to nonpublic school students and the problems encountered in sharing Title I funds between public and nonpublic school students in Title I districts.

CHAPTER III. COMPENSATORY INSTRUCTION

INTRODUCTION

School districts have considerable flexibility not only in selecting participants in compensatory programs, but also in deciding what services to provide and how to provide them. Title I funds can be used for both instructional programs and for auxiliary services such as counseling and health care, when they contribute to meeting the educational needs of low-achieving students. The following discussion focuses on the instructional services that school districts provide and on the different patterns of services they fund; Chapter V discusses auxiliary programs.

Section 141 of Title I states that the funds are to be used for programs of "sufficient size, scope, and quality so as to give reasonable promise of substantial progress towards meeting the needs of educationally deprived children." Determining whether programs meet such requirements is difficult because educational research has had only limited success in identifying the features of successful compensatory instruction. However, it is possible to provide information relevant to an assessment of instructional programs: first, a profile of services provided, and second, detailed information on selected characteristics of the instruction offered. The latter is a useful indicator of the degree to which programs are planned and incorporate promising approaches identified by research. Both kinds of information indicate the extent to which Title I and other compensatory programs have been implemented to provide special services to participating children.

The detailed characteristics examined were time spent on instruction, class and instructional group size, teacher qualifications and characteristics, and selected aspects of individualization. Of these, time, group size, and individualization were selected because the research evidence on their contribution to student achievement is most convincing. Teacher qualifications, moreover, can be particularly important in

compensatory programs because compensatory instruction, including such specialized techniques as individualized instruction, places great demands on teachers. NIE, therefore, collected data on how many compensatory education teachers had received advanced or specialized training likely to assist them in their responsibilities.

In addition, data were collected on whether instruction was provided in the regular classroom or in a separate location. These data provide descriptive information on a controversial issue: the degree to which low-achieving children are separated from their peers for compensatory instruction and, perhaps, for the entire school day.[1]

Additional information on the contributions of all five of these characteristics to student achievement has been collected by NIE in a study entitled "Instructional Dimensions." That information is now being analyzed and will be reported in a later volume in this series. The national profile of instructional services presented in this chapter can be further interpreted when the results of the Instructional Dimensions Study are reported.

INSTRUCTIONAL SERVICES PROVIDED

Nationally, three-quarters of Title I funding goes to instructional services. As Figure I shows, this compares with expenditures of less than 5% on auxiliary services. The remaining one-fifth goes for several categories of other expenditures, which vary from district to district. These other expenditures include administration and operation and maintenance of plant.

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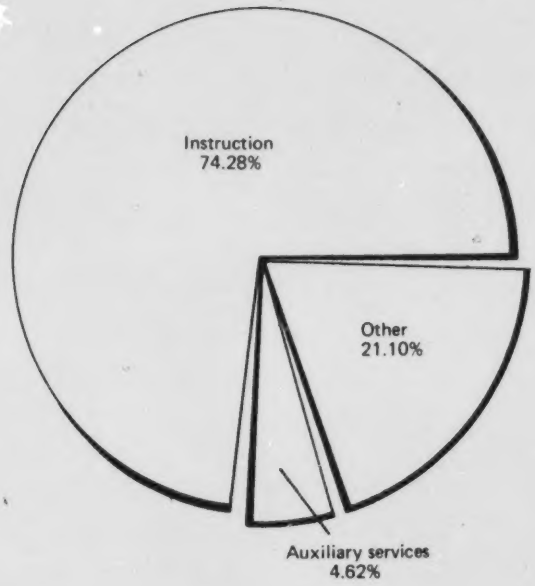
[1] For a more complete discussion of the relevant research findings, see Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study (Washington, December 1976): Chapter IV.



Budgeted Title I project expenditures:	$ 1.7 billion
Instruction:	1.2 billion
Auxiliary services:	.07 billion
Other:	.43 billion

FIGURE I. TITLE I BUDGET, U.S. TOTAL, 1975-76

Every Title I district provides some instructional services wth Title I funds. Table 3 demonstrates the percentage of districts using Title I funds for specific instructional services. The subjects in which Title I districts are most likely to offer compensatory instruction are remedial reading, mathematics, language arts, and preschool/kindergarten readiness programs.

TABLE 3

PERCENTAGE OF DISTRICTS OFFERING INSTRUCTIONAL SERVICES FUNDED WHOLLY OR IN PART BY TITLE I

	Percent		Percent
Remedial reading	69.1	Follow Through	6.9
Mathematics	45.0	Music or art	3.8
Preschool/kindergarten readiness activities	38.1	Special instructional program for dropouts	1.9
Language arts/ communication skills	29.7	Social/cultural studies	1.8
English as a second language	10.2	Health/nutrition	1.3
General enrichment	8.5	Science	1.2
Special education/ learning disabilities	7.8	Industrial arts/home economics	1.0

Remedial reading and language arts are separate types of programs. Unlike reading, language arts instruction is a broad program that includes grammar, spelling, writing, and speaking. Because language arts instruction frequently includes a reading component also, the percentages of districts offering remedial reading or language arts instruction can be combined to obtain a clearer picture of the general emphasis on reading and language. About 95% of all Title I districts offer remedial reading and/or language arts as part of their compensatory education activities.[2]

Remedial reading is also the subject in which most compensatory education students receive instruction. Table 4 indicates the percentage of compensatory education students in grades K-8 receiving compensatory instruction in each of the main subject areas.[3] About 85% receive compensatory instruction in remedial reading or language arts; no other subject is taught to a majority of compensatory education students.

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[2]Most of these districts fund either a remedial reading or a language arts program, but not both. Only 8% of the districts offer both types of services.

[3]The percent of compensatory education students receiving instruction in various subjects by grade can be found in Figures B-2, B-3, and B-4.

TABLE 4

COMPENSATORY INSTRUCTION RECEIVED
BY CE STUDENTS,
BY SUBJECT

	Percent of all CE Students*	Standard Error
Remedial reading	50.4	2.8
Language arts/communication skills	35.0	2.0
Mathematics	44.4	4.3
Social/cultural studies	13.7	2.8
Science	12.2	2.6
Special education/learning disabilities	5.3	0.8
English as a second language	2.9	0.6

*Percentages add to more than 100 because some compensatory education students receive compensatory education instruction in more than one subject.

Table 5 shows the percentage of compensatory education students receiving compensatory instruction in more than one subject. More than half of them receive compensatory instruction in only one subject, and that subject is most likely to be remedial reading or language arts; 1 in 10, on the other hand, receive compensatory instruction in four or more subjects.

TABLE 5

PERCENT OF CE STUDENTS RECEIVING
COMPENSATORY INSTRUCTION IN
ONE OR MORE SUBJECTS

	Percent	Standard Error
One subject	54.8	4.0
Two subjects	28.1	3.0
Three subjects	7.5	1.0
Four or more subjects	9.6	2.0

The data presented in the remainder of this chapter provide information on the special characteristics of compensatory instruction in reading, language arts, and mathematics.

SELECTED CHARACTERISTICS OF INSTRUCTION

The NIE National Survey collected information on five characteristics of compensatory instruction: time spent on instruction, class and group size, teacher qualifications and characteristics, individualization, and the location of instruction. The first four provide useful information on the degree to which special services have been planned and implemented for compensatory students. The fifth, location, was examined because it is of particular interest to educators and policymakers.

Instructional Time

Research indicates a direct relationship between the amount of time spent on instruction and student achievement. NIE, therefore, examined time spent in compensatory instruction programs, and compared that time to the total time available for instruction.

Each student receiving compensatory reading instruction spends an average of 3 hours and 47 minutes per week in such instruction.[4] The comparable estimates for language arts and mathematics participants are 4 hours and 3 hours, respectively.[5]

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[4] 227 minutes (standard error = 8.2 minutes).

[5] 249 minutes in language arts (standard error = 17.9) and 198 minutes in mathematics (standard error = 6.2). See Figures B-8 to B-10 for grade level variation. Unfortunately, no national data on the average amount of time students spend in regular language arts instruction are available for comparison. The Demonstration Projects Study commissioned by NIE, although not nationally representative, did collect information on amount of time in regular instruction as well as compensatory instruction. Comparisons of several aspects of regular and compensatory instructional services in 12 demonstration districts are presented in Chapter IV.

The percentage of total instructional time spent in compensatory instruction is roughly similar for these three groups of students: 29% for reading participants, 22% for language arts participants, and 27% for mathematics participants. Students who receive compensatory instruction in two or more subjects spend less time in any one subject. Compensatory education students generally spend an average of 20% to 25% of available time in compensatory instruction in one or more subjects.[6]

Class and Group Size

While classrooms with fewer students do not guarantee that teachers will attend to the needs of individual students, they provide greater opportunity for individual attention. The average class size for compensatory instruction is 9 students in remedial reading and 12 students in both language arts and mathematics.[7] These are significantly smaller classes than the students' homerooms, which contain an average of 27 students.

Within a classroom, of course, teachers can direct their instruction to the entire class, to subgroups, or to individual students. The majority of remedial reading, language arts, and mathematics teachers reported using all three methods. The average size for instructional subgroups was four to five students.

Teacher Qualifications and Characteristics

The special instruction required by compensatory students makes the education and specialized training of their teachers of special importance. The National Survey

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[6] From information about the total amount of time available to all students for learning, e.g., the number of minutes in the school day minus recesses and lunch, the percentage of time in compensatory instruction was calculated. This percentage takes into account differences in the length of the school day. Table B-1 illustrates grade-level differences in compensatory instructional time.

[7] See Figures B-5, B-6, and B-7 for grade-level variations in average class size for compensatory instruction in these three subjects.

collected general information on the characteristics of compensatory education teachers; on the types of staff involved in different subject areas; and on the extent to which teachers' aides, as well as professional instructional personnel, are used in providing compensatory instruction.

During the 1975-76 school year, an estimated 111,087 teachers, or approximately 10% of the teachers in Title I districts, were involved in providing compensatory education instruction. Approximately 87,160 teachers' aides (54% of all aides) worked in Title I programs in these districts.

Most of the teachers providing compensatory instruction have some advanced academic training beyond a bachelor's degree, and a considerable percentage have at least a master's degree. Table 6 reports information on the educational background and certification of these teachers.

TABLE 6

EDUCATIONAL BACKGROUND AND CERTIFICATION OF CE TEACHERS

	Percent
Degree	
Bachelor's or less	33.0
Bachelor's plus courses	36.5
Master's or more	30.5
Certification	
Temporary	15.8
Renewable	25.1
Permanent	58.1
None	1.0

The majority of compensatory education teachers specialize in a single subject, while 37.8% provide compensatory instruction in two or more subject areas.[8] In addition to these teachers, aides and other nonprofessional personnel provide compensatory instruction. The survey data were used to determine the percentage of students receiving instruction from the different types of instructors in reading, language arts, and mathematics. Table 7 provides this information. Because many students receive instruction in situations where more than one individual teacher is involved, the percentages in the table sum to more than 100. However, it is clear that students are more likely to receive some instruction from a specialist in remedial reading than in language arts or mathematics. In all three subject areas, students frequently receive instruction from aides.

When both a teacher and an aide are in the compensatory classroom, teachers report that the aides are frequently involved in giving attention to individual students. In compensatory reading classes, 42% of the teachers reported that aides provided individual instruction. In language arts, 58% reported the involvement of aides in providing individual attention; and in compensatory mathematics, 75% did so.

The time that students spend in compensatory instruction per week varies according to the types of instructors involved (see Table 8). For example, students receiving compensatory reading instruction involving aides receive approximately 4 hours and 20 minutes a week of such instruction, while students receiving compensatory reading with a subject area specialist receive almost 1 hour less compensatory reading per week. In language arts, on the other hand, students receive slightly more time when a specialist is involved, and in mathematics the differences are minimal.

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[8] Table B-2 indicates the distribution of teachers according to the subject in which they provide compensatory instruction.

TABLE 7

TYPES OF TEACHERS* FROM WHOM CE STUDENTS RECEIVE COMPENSATORY INSTRUCTION

	Classroom Teacher	Subject Area Specialist	Aides	Parents	Students
Percent of CE reading students	52.9	74.8	49.4	5.9	12.5
Standard error	4.4	3.3	5.7	1.4	2.6
Percent of CE language arts students	76.6	46.8	66.7	12.9	22.4
Standard error	4.8	4.4	3.2	3.1	4.7
Percent of CE mathematics students	73.6	48.7	62.0	11.3	23.3
Standard error	5.2	6.0	6.1	2.3	3.6

*Classroom teachers are those who regularly teach a variety of subjects, while subject area specialists regularly teach only one subject.

TABLE 8

AVERAGE MINUTES PER WEEK IN COMPENSATORY EDUCATION INSTRUCTION, BY INSTRUCTOR

	Reading	Language Arts	Mathematics
Classroom teacher	248	267	202
Subject area specialist	211	268	192
Teachers' aide	263	249	200
Paid parent	318	173	211
Volunteer parent	219	251	192
Older student	262	263	186
Peer	223	278	213
Average time per subject	247	249	198

Table 9 indicates the racial and ethnic distribution of compensatory education teachers. Though this distribution is less representative of the racial and ethnic distribution of the group of compensatory education students, which includes more minorities and fewer whites, it parallels closely that of total enrollment in Title I districts.

TABLE 9

RACIAL/ETHNIC DISTRIBUTION OF CE TEACHERS

	Percent
White	76.8
Black	19.6
Spanish surnamed	1.7
American Indian	0.1
Asian/Pacific Islander	0.5

Individualization

Individualized instruction is concerned with ways in which teachers pay attention to the different abilities and learning problems of individual children and is a major focus of NIE's research. Because it has been defined in different ways, the National Survey collected information not on "individualization" but on the extent to which compensatory education teachers utilize the following four individualized techniques: alternative learning paths and sequencing for individual children; individual or small group pacing; assignment of specific learning objectives or activities to individual children; and diagnostic and prescriptive activities.[9]

Table 10 reports the survey results for compensatory instruction in reading, language arts, and mathematics. Many teachers in each of these areas report that they individualize their instruction. There are, however, some interesting variations, and some of the techniques of individualization are less likely to be used than others. The first two techniques--alternative learning paths and sequencing, and individual or small group pacing--are reportedly in widespread use by compensatory education teachers in these three subject areas. The other two techniques are much less frequently used. Fewer than half of the teachers assign any specific learning objectives, and among those who do, objectives are generally set for the whole class, as well as for individual children. With respect to the use of diagnostic and prescriptive activities, many teachers report using standardized achievement test scores that reflect a student's performance in relation to others. Tests that provide detailed information on an individual student's skills are more appropriate for individualized instruction. The teachers' responses reveal few differences among the three subject areas in any of the four techniques.

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[9]The NIE Instructional Dimensions Study is examining the relationship between individualization and student achievement. The results of that study will be reported in September 1977. "Alternative learning paths and sequencing" refers to the technique of changing the material presented to a child, or the order in which it is presented, according to the child's interests and skills.

TABLE 10

TECHNIQUES CHARACTERIZING INDIVIDUALIZATION OF INSTRUCTION IN CE READING, LANGUAGE ARTS, AND MATHEMATICS PROGRAMS

Instructional Characteristic	Percent of CE Teachers Employing Characteristic		
	Reading	Language Arts	Mathematics
Alternative Learning Paths and Sequencing			
1) Level of difficulty of instructional materials:			
All approximately same level	20.9	28.1	21.7
Vary in level of difficulty	78.4	71.8	75.8
2) Sequence in which skills are taught:*			
All students receive in same order	25.0	29.4	31.0
Students receive in different sequence	63.0	70.5	57.0
Individual or Small Group Pacing			
3) How tasks are assigned:*			
To whole class	17.0	13.6	17.0
To small groups	32.0	43.1	29.0
To individual students	38.0	43.1	43.0
Specific Learning Objectives			
4) Use of performance objectives:			
Specific performance objectives used	38.5	43.0	44.0
Of those using specific objectives, goals are set for:			
Each child	90.4	83.7	83.8
Subgroups	64.9	71.2	59.4
Whole class	73.1	69.2	70.0
Diagnostic and Prescriptive Activities			
5) Measures used by teachers to assess performance level at beginning of instruction:			
Standardized achievement test scores	77.1	70.8	63.9
Standardized diagnostic test scores	45.7	43.7	35.1
Criterion- or objective-referenced tests	19.4	24.1	24.5
Student's age	14.8	17.0	11.1
Teacher judgment	72.7	79.5	68.1
Individualized skill inventory	47.6	60.0	36.4
Other methods	13.2	20.8	11.6
6) Frequency with which student progress is systematically recorded:			
5 or more times a week	23.1	22.0	25.0
1-4 times a week	46.0	52.3	45.1
1-3 times a month	21.6	19.7	23.3
Less than 1-3 times a month	8.8	5.8	6.5

*These questions were asked only of teachers with more than three students, so the percentages do not add to 100.

Location of Instruction

One of the controversial issues in the delivery of compensatory instruction has been the question of whether to provide special instruction inside or outside the students' regular classroom. Pullout programs guarantee that compensatory students receive an identifiable program. On the other hand, there is concern that their use might lead to tracking compensatory students for both regular and remedial instruction.

The survey, therefore, collected information on the current prevalence of pullout programs and on differences between the experiences of compensatory students in pullout and regular classroom settings. These two groups of students were compared to see if the location of their compensatory instruction affected their regular instruction, the amount of time they spent in compensatory instruction, or the type of teacher from whom they receive the compensatory instruction.

Many compensatory education students receive instruction in pullout programs in each of the three subjects (see Table II). Pullout programs are most widespread in compensatory reading, where three-quarters of the students receive their compensatory instruction outside the regular classroom.

TABLE 11

PERCENT OF CE STUDENTS IN PULLOUT PROGRAMS

	Percent	Standard Error
Compensatory education reading	74.5	4.0
Compensatory education language arts	40.5	5.0
Compensatory education mathematics	44.7	6.0

A large number of compensatory education students apparently are placed in a separate track for the entire school day. Survey results indicate that 23.6% of compensatory education students are grouped together for their regular instruction. That is, these students are placed in homerooms composed entirely of compensatory education students. One possible advantage of this practice of tracking compensatory education students for regular instruction is that the students are less likely to be pulled from their regular classrooms for compensatory instruction.[10] A disadvantage, of course, is that such compensatory education students spend their entire instructional day isolated from noncompensatory education students.

Given the large number of compensatory education students who leave their regular classrooms to receive compensatory instruction, it is important to determine whether they are more likely to miss regular instruction in some subjects than students receiving compensatory instruction in the regular classroom. Table 12 presents information on the kinds of regular instruction the two groups of students are likely to miss.[11] Students in pullout programs are more likely to miss some or all of their regular instruction in various subjects than those who receive compensatory instruction in their regular classroom. In fact, in the subjects for which they are receiving compensatory instruction, students in pullout programs are twice as likely as students in regular classroom programs to miss regular instruction.

Homeroom teachers stated that more than half the compensatory education students taught in their regular classroom, and about a third of those in pullout programs are not missing instruction in any subject. However, these teachers might have meant that the students were not missing all the instruction given in any subject; therefore, the numbers in this category should be treated with caution.

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[10] In 100% compensatory education homerooms, only 45% of the students receive reading in a separate location, 13.6% receive language arts in a pullout program, and 17.8% receive mathematics outside the regular classroom.

[11] Table B-3 provides this information for compensatory education students regardless of the location of the compensatory instruction.

TABLE 12

PERCENT OF PARTICIPANTS WHO MISS REGULAR INSTRUCTION, BY SUBJECT, DURING PARTICIPATION IN CE PROGRAMS

	CE Programs in the Regular Classroom			Pullout Programs		
Subject Missed	Reading	Language Arts	Mathematics	Reading	Language Arts	Mathematics
Reading	8	4	2	16	8	7
Language arts	4	6	4	14	20	13
Mathematics	2	4	7	8	12	16
Social studies	9	7	6	19	18	15
Science	6	10	6	15	15	12
Music	4	9	6	6	11	6
Art	4	8	7	7	11	6
Industrial arts/home economics	4	6	6	1	4	2
Physical education	3	4	4	5	5	4
Study time	13	8	8	19	18	13
Other subjects	5	7	7	11	11	8
No subjects missed	55	62	59	32	30	38

The survey data were also used to compare the amount of instructional time spent on the two groups of students. In this respect, the experiences of students in pullout and regular classroom programs do not differ. The percentage of instructional time devoted to compensatory instruction does not vary significantly between pullout and regular classroom programs in compensatory reading, language arts, or mathematics.

The type of staff providing the compensatory instruction was also examined to see whether it varied depending on whether the students receive the instruction in their regular classroom or another location (see Table 13). In each of the three

TABLE 13

PERCENT OF PARTICIPANTS RECEIVING COMPENSATORY INSTRUCTION FROM DIFFERENT TYPES OF STAFF

	Compensatory Programs in the Regular Classroom		
	Reading	Language Arts	Mathematics
Classroom teacher	85.9	92.6	91.3
Subject area specialist	48.6	31.1	24.3
Teachers' aide	72.8	72.1	73.7
Paid parent	0.7	1.0	1.5
Volunteer parent	13.5	13.6	12.9
Older student	9.6	10.8	13.6
Peer	16.2	15.8	21.7
	Pullout Programs		
	Reading	Language Arts	Mathematics
Classroom teacher	33.2	49.1	41.2
Subject area specialist	84.9	75.7	76.1
Teachers' aide	32.2	50.6	34.1
Paid parent	0.4	1.8	0.1
Volunteer parent	3.2	4.3	5.1
Older student	3.0	5.4	4.9
Peer	4.1	7.9	5.0

subjects, many more students receiving the compensatory instruction in a pullout program receive some of this instruction from specialists. In mainstream programs, though, more students receive instruction from the regular classroom teacher or from teachers' aides.

In sum, it appears that students in pullout programs are more likely to miss regular instruction than students in regular classroom programs. However, they have the advantage of being more likely to receive the compensatory instruction from a subject area specialist.

PATTERNS OF EXPENDITURES AND SERVICES

Although the National Survey was conducted to obtain a comprehensive description of services, the data collected also help account for differences among districts in terms of the numbers of pupils served, the location of instruction, and the total instructional time provided.[12]

Total expenditures for Title I--an amount approximately equal to the size of the district's Title I grant--are clearly a major determinant of the size of every district's program. In particular, the total amount of a district's Title I expenditure is closely related to the number of students served in every instructional area. The relationship is exceptionally strong for reading programs (i.e., total expenditures explain 84% of the variance in the numbers of students provided with compensatory reading instruction) and only slightly less strong for language arts, mathematics, and other subjects.

Total Title I expenditures also have a powerful effect on the ways districts deliver services, and specifically on the location of instruction. Pullout programs are more prevalent in districts with large Title I grants; in fact, the size of the Title I grant accounts for 89% of the variance in the numbers of students provided reading in pullout programs.

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[12] Appendix C provides a more complete technical description of the analyses on which this discussion is based.

These findings demonstrate the impact that Federal funding has on districts' programs. In addition, decisions made by the districts themselves influence heavily the kinds of services they deliver. To examine the consequences of district-level decisions, NIE analyzed the relationship between services delivered, Title I budget plans, and the types of compensatory education teachers hired.

The Title I budget is submitted to the SEA as part of each district's Title I application. It represents the district's plans for using Title I funds in the coming year and includes spending projections for several classes of Title I services, including each major instructional area.

NIE analyzed the survey data to determine the degree to which districts' spending plans, as represented by their Title I budgets, accounted for differences among the services delivered. Surprisingly, Title I budgets proved to be not at all informative about the services actually delivered. The dollar amounts projected for various instructional areas were related only weakly to the numbers of students served and the time spent in instruction in these areas. (In general, they explained less than 5% of the variance in each of the measures of services delivered.) These findings reflect the low utility of the Title I application as a predictor of district practices.

However, other district choices explain a great deal about the differences in their compensatory instructional programs. This becomes clear on examining district differences in selecting compensatory education teachers, a key instructional resource.

The number of teachers hired is a function of overall Title I expenditures, and teacher salaries account for nearly all of the instructional expenses in Title I. The number of teachers employed, therefore, should explain a great deal of the differences among districts' compensatory programs.

In fact, teacher hiring is strongly related to the two available indicators of the quantity of compensatory services provided: numbers of students served and total instructional time provided. For example, the size of the teaching staff explains 96% of the variance in the numbers of students provided with compensatory reading, and it is an equally strong indicator of the total time spent in compensatory reading. Similar

relationships can be demonstrated in the other three principal instructional areas examined.

Finer distinctions among types of instructional staff are also informative. Districts' choices among types of staff (i.e., teachers' aides, teachers with only bachelor's degrees, those with graduate work, and teachers with master's or higher degrees) explain differences in the nature, as well as the quantity, of instruction that districts deliver.

District decisions to hire certain types of teachers are closely related to the kinds of instruction emphasized in their compensatory programs. The relationship is particularly clear with two types of staff: aides and teachers with a bachelor's degree or less. Districts hiring teachers' aides generally focus on compensatory reading and are likely to serve fewer than average students in the other instructional areas. In contrast, districts hiring teachers with a bachelor's degree or less emphasize participation in language arts programs. They also serve fewer students than average in reading, mathematics, or other subjects. Finally, although the relationship is not as strong, districts that hire teachers with master's degrees tend to focus primarily on reading and mathematics.

Staffing decisions are also related to districts' use of pullout programs. Districts with more students participating in pullout programs hire more teachers with master's degrees. Pullout reading programs, moreover, exhibit a distinctive staffing pattern. Districts that emphasize student participation in pullout reading hire more teachers' aides as well as teachers with master's degrees.

NIE's analysis also shows a relationship between staffing decisions and the amount of time scheduled for compensatory instruction. In general, districts hiring less well educated and therefore lower paid personnel schedule more hours of compensatory instruction. Among those emphasizing pullout reading, districts hiring more aides provide more time than those hiring only teachers with master's degrees. In language arts programs, districts employing compensatory education teachers with a bachelor's degree or less also provide several times as much total compensatory instruction time as those hiring compensatory education teachers in the highest

education category. Given the constraint of a certain amount of Title I funds to spend, a district's decision to schedule more time in compensatory instruction in a particular subject requires hiring aides or less highly educated teachers for the programs.

These findings demonstrate that the differences observed in the ways in which districts conduct their Title I programs are not haphazard or inexplicable. They are clearly related both to the constraints imposed by Federal funding and to choices made by the districts themselves.

CHAPTER IV. REGULAR AND COMPENSATORY INSTRUCTION IN 12 SCHOOL DISTRICTS

The most direct method of assessing the special nature of Title I instruction is to compare Title I services provided to participating students with the instruction that they and nonparticipants receive as part of school districts' regular programs. NIE collected the detailed information required for such an analysis from 12 school districts involved in research on experimental changes in Title I allocations. Although these districts are not a nationally representative sample, they do provide one of the most complete descriptions to date of the differences between the instruction received by Title I and non-Title I students.

The analysis focuses on four of the characteristics of instruction examined in the preceding chapter: amount of instructional time, class size, type of teacher, and individualized instruction. This chapter, therefore, extends NIE's analysis of compensatory instruction. It provides detailed information on the differences between the compensatory and regular instruction received by Title I students in reading and language arts and compares that instruction with the services received by nonparticipants.[1]

DATA ON SERVICES IN 12 DEMONSTRATION DISTRICTS

The 12 demonstration districts providing the information discussed below have initiated projects to examine the effect of a possible change from poverty to

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[1] Due to the small size of the compensatory mathematics programs in these districts, and therefore the small number of sample students receiving such instruction, a detailed analysis for mathematics has not been conducted.

achievement as the eligibility criterion for allocating Title I funds within school districts.[2]

NIE is conducting a 3-year study in these districts. In the first year (1975-76), the districts continued to operate Title I programs using standard allocation procedures. During that year, data were collected on the services that districts delivered to Title I and non-Title I students. These data, collected before the demonstration districts implemented the allocation changes, are the basis for the results reported in this chapter.

The data include information on the specific characteristics of Title I and regular instructional services and are based on a sample of approximately 3,000 students from 3d- and 4th grade classrooms in the 12 districts.[3] This chapter describes Title I and non-Title I language arts instruction, defined here to include both reading and other language arts components.[4] The instructional characteristics examined are:

- Time (minutes per day) spent in language arts, other academic instruction, nonacademic instruction, and other activities
- Instructional group size, defined as the number of students taught for the particular activity being described
- Type of teacher, defined as the person responsible for the activity being described

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[2]Thirteen districts are actually participating in the Demonstration Study. The results from only 12 are analyzed in this chapter because the sample of students receiving language arts instruction in the thirteenth was too small to permit reliable estimates. For a more detailed description of the demonstration projects, see Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study. Washington, D.C.: The National Institute of Education, December 1976.

[3]The Title I sample discussed in this chapter is limited to those children who actually received compensatory language arts instruction.

[4]This definition differs from that used by the National Survey, which collected data separately for reading and language arts programs.

- Amount of individualized instruction or the extent to which 3d- and 4th-grade teachers of regular and compensatory classes tailor their instructional practices to individual needs

Two important questions can be addressed with the data:

- How does the compensatory instruction received by Title I students differ from the regular instruction these students receive?

- How does the instruction (regular and compensatory) received by Title I students differ from the services non-Title I students receive?

FINDINGS

Instructional Time

Table 14 shows the amount of time per day that Title I and non-Title I students spend in regular and compensatory language arts instruction. If regular and compensatory instruction are combined, Title I students receive more language arts instruction per day than non-Title I students in 9 of the 12 districts. In two districts, Title I students receive approximately the same amount of time in language arts instruction as non-Title I students; in one district, they receive less.

A comparison of the amount of time that the two groups of students spend in regular language arts instruction indicates that compensatory instruction in language arts typically replaces some regular language arts work for Title I students. In 11 of the 12 districts, Title I students spend less time in regular language arts instruction than other students.

Compensatory language arts instruction also replaces other academic and non-academic work, though to a lesser degree (see Table 15). For example, in 10 of the 12 districts, students lose an average of a few minutes per day in academic instruction other than language arts. Some of the students missing academic instruction might do so because they participate in other compensatory programs as well as language arts.

TABLE 14

AVERAGE NUMBER OF MINUTES PER DAY SPENT IN LANGUAGE ARTS INSTRUCTION BY TITLE I AND NON-TITLE I STUDENTS IN THE DEMONSTRATION DISTRICTS

	Title I Students*			Non-Title I Students**		
District	Regular Instruction	Compensatory Instruction	Total Instruction	Regular Instruction	Compensatory Instruction	Total Instruction
1	109	28	137	119	1.3	120
2	68	41	109	100	7.0	107
3	111	35	146	143	1.4	144
4	90	42	132	106	2.4	108
5	97	35	132	110	1.4	111
6	120	28	148	130	1.0	131
7	122	38	160	145	3.1	148
8	96	37	133	109	1.4	110
9	112	34	146	129	2.0	131
10	111	27	138	109	1.0	110
11	112	41	153	136	1.7	138
12	67	30	97	108	2.2	110
Average	101	35	136	120	2.2	122

*N = 412.
**N = 2,513.

TABLE 15

AVERAGE NUMBER OF MINUTES PER DAY SPENT IN OTHER ACADEMIC AND NONACADEMIC INSTRUCTION BY TITLE I AND NON-TITLE I STUDENTS IN THE DEMONSTRATION DISTRICTS

	Other Academic Instruction*		Nonacademic Instruction**		Other Activities***	
District	Title I	Non-Title I	Title I	Non-Title I	Title I	Non-Title I
1	73	94	49	53	101	118
2	79	79	62	47	72	87
3	95	103	36	38	104	121
4	69	81	33	45	106	104
5	89	95	49	57	85	93
6	86	94	49	56	118	118
7	118	118	47	57	65	68
8	76	90	54	63	101	104
9	82	89	63	69	94	100
10	80	91	56	61	127	125
11	81	88	47	52	82	84
12	89	100	58	45	139	129
Average	85	94	50	54	100	104

*Other academic instruction includes such subjects as mathematics (both regular and compensatory), science, social studies, and English as a second language.

**Nonacademic instruction includes such subjects as physical education, fine arts, and cultural enrichment.

***Other activities include, for example, lunch and recess.

Instructional Group Size

The amount of individual or small group instruction that children receive is thought to be an important determinant of their success in school. Because the average compensatory class in the demonstration districts has about eight children, the instructional groups in these classes are likely to be smaller than in regular classes.

Table 16 compares the proportion of time that Title I students spend in instructional groups of different sizes during their regular and compensatory instruction. As expected, in all 12 districts, they generally receive compensatory language arts instruction in smaller groups than those in which they receive regular instruction. On the average, there is little difference in the amount of individual instruction in the two classes, though considerable variation exists. However, district programs devote an average of half their compensatory instruction time to teaching in small groups of two to five students and almost no time to large group instruction. In regular language arts classes, medium and large group instruction absorbs the greater part of available time.

Table 17 compares Title I and non-Title I students and examines the total time (regular and compensatory) spent in groups of different sizes. Title I students consistently spend more time in small group instruction than non-Title I students. In 11 of the 12 districts, they also spend less time being taught in large groups. There is no consistent pattern for individual or medium-size group instruction.

Teacher Type

Table 18 shows the proportion of time Title I students spend with different types of teachers in compensatory and regular language arts classes. The table distinguishes classroom teachers, who have regular homeroom responsibilities, from instructional specialists, who teach a single subject area such as language arts.

In making comparisons between teachers of Title I and non-Title I children, the terms "classroom teacher" and "instructional specialist" refer to teaching responsibilities and not necessarily to qualifications, experience, or employment status. A comparison of classroom teachers and specialists in the demonstration

TABLE 16

PROPORTION OF TIME TITLE I STUDENTS SPEND IN INSTRUCTIONAL GROUPS* OF VARIOUS SIZES IN THEIR REGULAR AND COMPENSATORY LANGUAGE ARTS CLASSES

	Regular Instruction					Compensatory Instruction				
District	Individual**	Small***	Medium†	Large††	Total Minutes/Day†††	Individual	Small	Medium	Large	Total Minutes/Day
1	21%	13%	30%	36%	109	7%	30%	63%	0%	28
2	42	16	28	14	68	37	36	27	1	41
3	12	19	15	54	109	25	46	16	13	32
4	13	17	46	25	86	7	47	44	2	40
5	13	16	39	31	94	16	51	34	0	35
6	8	9	33	50	118	3	38	59	1	27
7	6	11	35	48	119	7	27	62	4	37
8	13	16	19	52	93	7	90	3	0	36
9	9	4	42	45	108	20	80	0	0	34
10	18	25	39	18	109	10	73	17	0	27
11	8	7	47	37	107	5	50	46	0	41
12	19	13	10	58	67	7	61	26	7	30
Average	15%	14%	32%	39%	99	13%	52%	33%	2%	34

*Instructional group size reflects the number of students attending the same lesson or assignment.

**Individual groups include one student.

***Small groups include two to five students.

†Medium groups include 6 to 20 students.

††Large groups include more than 20 students.

†††Total minutes for group size do not match total minutes in language arts instruction cited in Table 14 due to differential nonresponse on the two questionnaire items.

TABLE 17

PROPORTION OF TIME TITLE I AND NON-TITLE I STUDENTS
SPEND IN INSTRUCTIONAL GROUPS
OF VARIOUS SIZES

	Title I Students					Non-Title I Students				
District	Individual	Small	Medium	Large	Total Minutes/Day	Individual	Small	Medium	Large	Total Minutes/Day
1	20%	16%	35%	29%	137	12%	10%	26%	51%	121
2	44	24	21	11	109	17	18	37	29	106
3	11	30	16	43	141	10	5	33	53	142
4	11	26	46	17	126	11	14	46	28	99
5	14	27	38	21	129	16	7	36	41	110
6	7	14	38	41	145	9	5	28	57	128
7	6	13	42	38	156	7	6	39	49	145
8	11	35	16	38	129	18	10	19	53	107
9	11	23	32	34	142	5	3	17	74	130
10	18	34	35	14	136	14	17	35	35	107
11	7	19	48	26	148	9	6	38	47	132
12	17	27	18	39	97	26	9	30	36	111
Average	15%	24%	32%	29%	133	13%	9%	32%	46%	120

TABLE 18

PROPORTION OF TIME TITLE I STUDENTS SPEND WITH DIFFERENT TYPES OF TEACHERS IN THEIR REGULAR AND COMPENSATORY CLASSES

	Regular Instruction					Compensatory Instruction				
District	Classroom Teacher	Specialist	Paraprofessional*	No Adult**	Total Minutes/Day***	Classroom Teacher	Specialist	Paraprofessional	No Adult	Total Minutes/Day
1	65%	0%	2%	34%	109	0%	84%	10%	6%	32
2	51	1	13	35	67	19	32	34	16	41
3	87	1	1	11	109	12	62	22	4	34
4	77	3	3	17	87	5	88	5	2	41
5	73	6	5	16	95	0	87	10	3	35
6	82	1	3	14	119	2	94	3	1	28
7	84	2	3	12	117	5	85	8	2	37
8	75	2	4	19	94	1	22	77	0	36
9	85	1	3	11	111	0	11	88	1	34
10	62	2	12	25	109	5	82	14	0	24
11	77	2	2	19	110	2	80	13	6	40
12	54	0	0	46	61	7	67	0	26	30
Average	73%	2%	4%	22%	99	5%	66%	24%	6%	34

*Paraprofessionals include student teachers, paid aides or assistants, parent/adult volunteers, other adults (excluding professionals and specialists), and older students. This category can include some staff who are certified to teach.

**No adult means that for the period of time recorded the child was working without direct supervision.

***Total minutes for teacher type do not match total minutes in language arts instruction cited in Table 14 due to differential non-response on the two questionnaire items.

districts indicates that on the average specialists have a higher level of education than regular classroom teachers but approximately equal experience. In terms of employment status, more specialists are nontenured, though both specialists and teachers are full-time employees.

However, differences between classroom teachers' and specialists' educational levels and years of experience vary substantially among districts. In some sites, the position of specialist appears to be one of leadership based on training and/or experience. In others, specialists have less experience than teachers and either approximately the same or only slightly higher educational levels.[5]

In all 12 districts, Title I students receive more instruction from specialists while in their compensatory language arts classes than while in regular language arts. In the compensatory classes, they also spend less time with no direct adult supervision. Finally, in many of the districts, Title I students spend more time with paraprofessionals while in compensatory classes.

Table 19 compares total time (regular and compensatory) that Title I and non-Title I students spend with different types of teachers. The differences closely parallel those between regular and compensatory instruction for Title I students. Title I students generally spend more time with instructional specialists, less time with no adult supervision, and less time with classroom teachers than do non-Title I students. In most districts, they also spend slightly more time with paraprofessionals.

However, the relative emphasis placed on the use of paraprofessionals and instructional specialists in Title I programs varies considerably in these districts. Some pupils spend relatively little time with paraprofessionals and a great deal with specialists; other programs rely more heavily on paraprofessionals.

Individualized Instruction

In these 12 districts, Title I students are more likely to receive instruction in small groups and from specialists than children in regular classes. Thus, the possibility of providing individualized instruction is increased.

[5] See Tables B-4 and B-5.

TABLE 19

PROPORTION OF TIME TITLE I AND NON-TITLE I STUDENTS SPEND WITH DIFFERENT TYPES OF TEACHERS

	Title I Students					Non-Title I Students				
District	Classroom Teacher	Specialist	Paraprofessional	No Adult	Total Minutes/Day	Classroom Teacher	Specialist	Paraprofessional	No Adult	Total Minutes/Day
1	49%	18%	4%	28%	141	70%	2%	3%	24%	120
2	38	11	22	28	108	52	4	15	28	106
3	71	17	3	9	143	80	2	4	15	143
4	52	31	4	13	128	70	3	4	22	104
5	52	29	7	13	130	71	5	3	21	110
6	66	19	3	12	147	77	1	2	20	129
7	65	22	4	9	154	79	3	1	16	145
8	56	10	20	14	130	67	2	4	27	108
9	64	4	23	9	145	83	3	4	11	130
10	51	17	11	20	133	69	1	9	21	105
11	57	23	5	15	150	70	3	3	24	134
12	35	23	0	43	91	56	5	5	34	109
Average	55%	19%	9%	18%	133	70%	3%	5%	22%	122

Table 20 summarizes the responses of demonstration district teachers to a number of questions about how they individualize instruction for Title I children in regular and compensatory classes. It shows that compensatory education teachers are more likely than regular teachers to:

- Use different materials for different children
- Assign tasks to individual students
- Set specific performance objectives for individual children and have access to materials keyed to those objectives
- Use standardized achievement or diagnostic tests
- Record children's progress at frequent intervals

Although compensatory education teachers on the average report using more individualized instruction than regular teachers, considerable variation is found within and across sites. Some districts' programs are individualized in a number of different ways, but most devote their attention to some, but not all, aspects of individualization.

In general, the results suggest that certain characteristics of compensatory classes (i.e., small group size or specially trained staff) provide the opportunity for individualized instruction but do not in themselves guarantee that it will occur.

PATTERNS OF SERVICES

The findings indicate that the compensatory language arts instruction received by Title I children in the 12 districts is generally different from the instruction received by Title I and non-Title I students in regular classrooms. Compensatory instruction is not always different in every characteristic from regular instruction, but Title I students in every district receive instruction that is distinctive in some ways.

TABLE 20

TECHNIQUES CHARACTERIZING INDIVIDUALIZATION OF INSTRUCTION IN REGULAR AND COMPENSATORY LANGUAGE ARTS PROGRAMS IN THE DEMONSTRATION DISTRICTS (FOR TITLE I STUDENTS ONLY)

Instructional Characteristics	Average Percent of Teachers Employing Characteristics			
	Regular Classes		Compensatory Classes	
	Mean	Range	Mean	Range
Alternative Learning Paths and Sequencing				
1. How materials are used:				
a. Different materials for different children	30	7 to 47	51	0 to 100
b. Same materials, different sequence	17	0 to 40	18	0 to 60
c. Same materials, same order, different rate	35	0 to 47	5	0 to 45
d. Same materials, same order, same rate	16	0 to 47	5	0 to 45
Individual or Small Group Pacing				
2. How tasks are assigned:				
a. To individual students	26	19 to 42	55	30 to 100
b. To small groups	27	14 to 44	27	0 to 52
c. To whole class	49	27 to 67	19	0 to 46
Specific Learning Objectives				
3. Use of performance objectives:				
a. Specific performance objectives used	87	72 to 100	90	56 to 100
b. Of those using specific objectives, goals are set for:				
Each child	13	0 to 33	65	0 to 100
Small groups	20	0 to 45	19	0 to 83
Total group	66	42 to 100	16	0 to 100
c. Of those using specific objectives, access to materials keyed to those objectives	64	43 to 88	94	57 to 100
Diagnostic and Prescriptive Activities				
4. Tests used to assess performance level at beginning of instruction:				
a. Standardized achievement test scores	54	20 to 80	86	30 to 100
b. Standardized diagnostic test scores	39	20 to 60	71	40 to 100
c. Scores on district-, school-, or program-developed tests keyed to instructional objectives	51	22 to 97	64	33 to 100
d. Scores on teaching staff-developed tests keyed to instructional objectives	57	20 to 80	52	0 to 100
e. Informal testing	82	50 to 100	74	33 to 100
5. Frequency of recording students' progress:				
a. 5 times a week	2	0 to 7	28	0 to 100
b. 1-4 times a week	16	6 to 40	36	10 to 59
c. 1-3 times a month	58	27 to 93	25	0 to 67
d. Less than 1-3 times a month	23	0 to 60	10	0 to 70

Table 21 summarizes data that indicate whether the language arts instruction received by Title I students is more intensive (i.e., it provides additional minutes of instruction, more time in groups of one to five students, and more time with professional staff). The table does not include data on individualized instruction because most districts did not demonstrate consistent patterns across all dimensions.

In general, the results show that in each of the 12 districts, Title I students receive special services in the sense that they are given some additional time in language arts instruction, or they receive instruction in smaller groups, or from more highly qualified staff.

Title I students in some districts receive instruction that is distinctive in all three characteristics. For example, Title I students in district 10 receive more language arts instruction than other students, and they receive this instruction in smaller groups and from more highly trained staff.

Many districts do not provide Title I students with instruction that is equally distinctive in all respects. For example, Title I students in district 9 receive more language arts instruction and substantially more small group instruction than non-Title I students. However, the Title I students spend less time with professional staff. In contrast, Title I students in district 12 spend considerably more time with instructional specialists but receive less language arts instruction overall than other students.

These differences among districts are not surprising because districts must make difficult choices in planning their compensatory programs. A decision to increase the time spent in language arts instruction means that students have less time available for other curricula. A decision to hire highly paid instructional specialists might mean that each student receives less time in direct instruction; less highly paid classroom aides can help provide more time in instruction, but the average level of teachers' formal qualifications might be reduced. The data from these 12 districts provide an illustration of the ways districts respond to these alternatives and the tradeoffs they make.

TABLE 21

TITLE I VS. NON-TITLE I STUDENTS' INSTRUCTIONAL EXPERIENCE
(REGULAR AND COMPENSATORY)

District	Additional Minutes/Day in Language Arts Instruction	Additional Minutes/Day in Groups of 1 to 5 Students	Additional Minutes/Day with Professional Staff		
			Specialist	Classroom Teacher	Total
1	+17	+23	+22*	-16	+6
2	+2	+32	+5*	-12	-7
3	+2	+34	+21	-8	+13
4	+24	+21	+35	-5	+30
5	+21	+27	+30	-9	+21
6	+17	+11	+27	-3	+24
7	+12	+11	+29	-14	+15
8	+23	+31	+10	-1	+9
9	+15	+36	+3	-14	-11
10	+28	+34	+22*	-5	+17
11	+15	+18	+30	-6	+24
12	-13	+3	+11*	-28	-17
Average	+14	+23	+20	-10	+10

*Instructional specialists in these districts have additional training or experience.

CHAPTER V. AUXILIARY SERVICES

Title I funds have always been used to support a wide variety of programs, including not only instruction but also support services of many kinds. As a 1974 Senate report noted:

> . . .local officials are charged with developing local solutions to meet their specific needs. Often the solutions involve remedial education programs in the basic skills. But many local officials have found that their children's educational progress also depends on provision of auxiliary services such as guidance and counseling programs.

The quality of these auxiliary programs and their relevance to the educational needs of disadvantaged children have become a matter of debate, however, and their continued funding under Title I has been questioned. Recent legislative proposals would require that a small fixed proportion of Title I funds be allocated for auxiliary components or that only basic skills instruction be funded.

Although it appears that the proportion of funds allocated to auxiliary services has declined considerably since the beginning of Title I, no detailed information on these services has been collected in recent years. At the outset of the NIE study, it was impossible to ascertain which services were being supported, whether they were designed in relation to students' educational needs, or how they would be affected by the proposed limitations.

To provide substantive data on the current role of auxiliary services in Title I, NIE, therefore, examined the services offered in a variety of districts. The data come from two sources: the NIE National Survey conducted in 1975-76 and followup case studies conducted the following year in 18 of the survey districts. The survey provides nationally representative summary information about the proportion of districts' Title I budgets spent on auxiliary services and the levels of services provided. The case studies provide specific details about the types of auxiliary programs selected by districts for Title I funding.

Four issues were examined in the case study districts. First, the precise categories of auxiliary services and their importance in districts' Title I budgets were described. Districts apply to use Title I funds for services such as health, guidance, social work, food, transportation, and community services. However, no information was available previously that made clear precisely what these services comprise or how they differ from locally funded programs.

Second, NIE examined the changes that have occurred in the nature of the auxiliary services offered within the last 4 years to learn the extent to which States and districts have altered their priorities and either reduced the scope of auxiliary components or changed the nature of the services. It seemed likely, for example, that Federal regulations emphasizing basic skills instruction might already have affected the selection of services offered, as might new legislation and regulations concerning parental involvement.

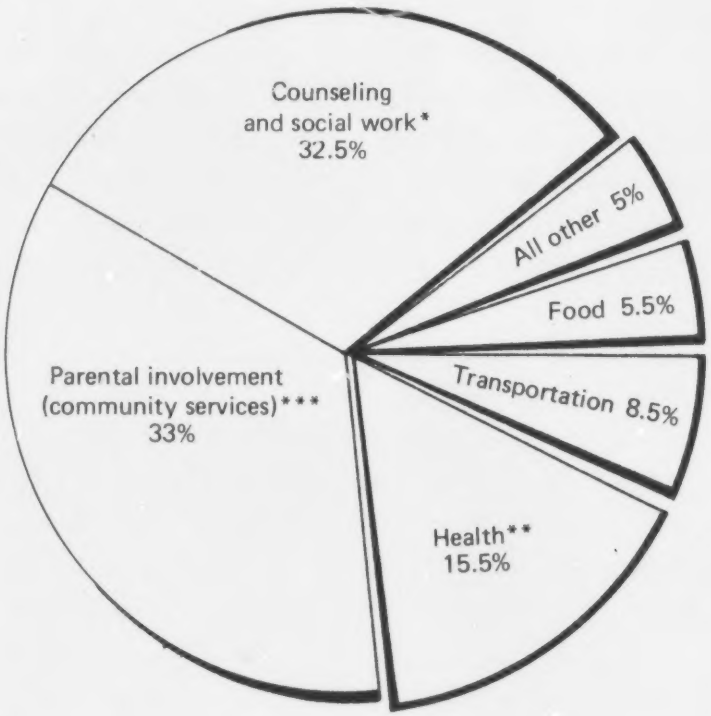
Third, information was obtained on the factors that underlie funding decisions in the area of auxiliary services. NIE analyzed the role of such factors as financial pressures and OE regulations, as well as local needs assessments and evaluations, in determining whether sample districts elect to provide auxiliary services at all. Where such services are provided, NIE examined the factors that influence the choice of services and the level of funding allocated to this portion of the budget.

Finally, NIE obtained information on districts' possible future decisions in this area. This information is derived from the opinions and preferences of local district personnel concerning their Title I auxiliary service components, including: whether they are satisfied with their auxiliary service programs; whether they would like to provide more or fewer services in these areas; and whether more flexibility or additional funding would change the kinds of services offered.

NATIONAL ESTIMATES FROM THE NIE SURVEY

As a percentage of overall Title I expenditures, the amount of money spent for auxiliary services is small. The NIE National Survey found that only 4.6% of the total Title I budget, about $78 million, was allocated for these services in 1975-76.

Approximately one-third of this amount goes to parent involvement services, which are the largest single auxiliary component (see Figure 2). Another third goes to such services as guidance and social work. The remaining third is divided between health and all other auxiliary services, including transportation and food.



*Includes attendance services.
**Includes speech and hearing therapy.
***Funds spent to involve parents in the Title I program, especially through encouragement of PACs, are generally applied for under the category community services. Because parent involvement is a more accurate term, it is used in this report.

FIGURE 2. TITLE I BUDGET FOR AUXILIARY SERVICES, U.S. TOTAL, 1975-76

In addition to budget figures, the National Survey provided two other estimates of the level of auxiliary services provided nationally: the percentage of districts that offer particular services and the numbers of children who receive them. A large number of districts might fund a given service without allocating it much money, while a service funded in relatively few districts might serve more children. For this reason, the two measures show quite different patterns.

Overall, 59% of Title I districts use some Title I funds for auxiliary services. Table 22 lists the percentage of districts using Title I funds for each auxiliary service in 1975-76. According to the survey, the most frequently funded auxiliary services are

TABLE 22

AUXILIARY SERVICES FUNDED WHOLLY OR IN PART BY TITLE I

Type of Service	Percent of Districts Providing Service	Type of Service	Percent of Districts Providing Service
Resource centers	28.5	Social work	12.2
Libraries	21.3	Counseling	9.5
Medical/dental	19.6	Community services	9.4
Psychiatric and diagnostic	18.8	Student body activities	7.9
Transportation	14.6	Clothing	5.5
Food	14.2		
Speech and hearing therapy	13.8		

those most directly related to instruction--resource centers and libraries.[1] A substantial percentage of districts uses Title I funds to provide medical, psychiatric/diagnostic, transportation, and even food services.

Table 23 lists the survey estimates of the number of students receiving some of these auxiliary services. A child is counted once for each service received. Thus, these numbers cannot be summed to yield a national estimate of numbers of children served. Also, because records of auxiliary services are less precise at the district level than records of instructional programs, these estimates are rougher than those for instructional services. However, they indicate that, for example, transportation and food services are received by considerably fewer students than social work, even though a larger number of districts allocate some funding to the first two services than to the third.

TABLE 23

NUMBER OF STUDENTS RECEIVING SELECTED AUXILIARY SERVICES FUNDED BY TITLE I

	National Total	Percent of Participants
Health	786,830	13.3
Counseling and psychological	527,284	8.9
Social work	629,789	10.7
Transportation	349,175	5.9
Food	65,344	1.1
Other	369,833	6.1

[1] Many districts include resource centers and libraries as part of their instructional program and do not budget or keep records for them separately as part of their auxiliary services program. As a result, subsequent tables from the survey do not include these services as part of the auxiliary services program.

According to these estimates, Title I health services are provided to more children than any other auxiliary service--about one out of eight participants in the Title I instructional program. Counseling and psychological services and social work are among other services provided to a substantial number of Title I children.

Analyses of the survey data did not show any consistent relationships between district characteristics, such as size or poverty level, and levels of auxiliary services provided.

THE FOLLOWUP CASE STUDIES

The 18 case study districts were chosen on the basis of survey information to represent the range of district characteristics and program features as they existed in 1975-76. They differ in size, poverty level, and percentage of minority students; and they vary in the patterns of expenditures for auxiliary services. Included were districts focusing all their auxiliary funds on one type of service, districts providing a range of services, and districts that provided none.[2] For all 18 districts, the average proportion of Title I funds spent for auxiliary services was 7%. This is higher than the national average because the sample was chosen to allow NIE to report on a wide range of programs.

Title I administrative personnel in these districts were interviewed informally about the nature of services provided; how these have changed in the past 4 years; how decisions to deliver auxiliary services are made; and what opinions local school district officials hold regarding these services.

Table 24 summarizes information on the number of case study districts providing particular services and the percentage of the districts' Title I grant spent for each. Health, social work, parent involvement, guidance and psychological services, and

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[2]For additional details concerning the sample construction and characteristics of the 18 districts, see NIE National Survey Followup Study of Non-Instructional Auxiliary Services, National Opinion Research Center, Chicago, Illinois, July 1977.

and transportation are the most frequently offered services. The service for which the highest average proportion of Title I funds is spent is social work, followed closely by guidance and psychological services, and parent involvement.

TABLE 24

AUXILIARY SERVICES FUNDED
BY TITLE I IN 1976-77
IN 18 DISTRICTS

	Number of Districts Providing Service	Average Percent of Title I Grant in Districts Providing Service	Range of Percent
Libraries/resource center	2	1.9	0.3 to 3.5
Health	8	2.8*	0.4 to 7.0
Guidance and psychological	6	4.6	1.1 to 7.3
Social work	7	5.0	0.3 to 21.6
Parent involvement	7	4.0	0.1 to 11.3
Transportation	5	0.7	0.5 to 1.1
Speech therapy	3	3.3	0.3 to 6.7
Food	2	0.4	0.05 to 0.9
Other attendance services	1	1.5	1.5

*Includes only the six districts where budget figures are available; two programs are not separately budgeted--one is a summer program and the other serves nonpublic school students only.

Library/Resource Centers

The emphasis in the library programs is on serving Title I children by maintaining special materials for use in the classrooms and by providing reading materials of interest to teachers and parents (e.g., professional literature for staff and fiction and nonfiction intended specially for Title I parents). Descriptions of several discontinued library services indicate that they differed from the current services in that they consisted mainly of extra library personnel to give special assistance to Title I children. Current library services stress the provision of resource materials.

Health Services

Districts' Title I health programs generally have similar goals: to identify and remove health problems that interfere with a child's performance in school. The most common type of program identified in the case studies provides the services of nurses whose salaries are paid in whole or in part by Title I. Their activities include medical and dental screening, immunization, referrals, and arranging physical examinations. An important part of these programs is often special prevention and followup activities. These involve working with parents to provide health, nutrition, and hygiene education; special referral services; home visits; and parent consultation. Except in emergencies, the nurses generally serve only Title I children.

All the districts providing school nurses also have a locally funded nursing program. The Title I program differs from the local program in that it provides faster responses to problems of Title I children, as well as more comprehensive screening, home/school liaison, and followup services.

Three health programs differed from the pattern of nursing services described above. Two paid for children's hearing aids, eyeglasses, or doctor bills if no other source of funds could be found. The other service consisted of a comprehensive medical examining team that traveled from school to school providing medical examinations and some limited dental care to Title I children.

Guidance and Psychological Services

Like the health programs, the goals of the guidance and psychological services generally relate to removing obstacles to academic achievement. These services are usually offered in elementary schools and provide funds for two kinds of specialists--counselors and psychologists. The counselors typically work with individuals and with small groups of students or parents in direct counseling; engage in game- and role-playing activities designed to improve attitudes or to overcome emotional or behavioral problems; consult with parents and school personnel; and arrange referrals for specialized assistance outside the school. Psychologists generally provide psychological testing and other diagnostic services; they frequently make

recommendations for treatment or alternative educational plans for children referred to them, and serve as consultants to parents and school personnel. In contrast to the health programs, districts that currently provide Title I guidance and psychological service programs are unlikely to provide similar services to non-Title I children in the same grades.

Social Work

Social work programs generally are intended to meet the emotional, cultural, and social needs of Title I children. The social workers act as a liaison between home and school, advising parents on ways to help their children in school. Social workers also make referrals to appropriate community agencies for welfare services, assist parents in dealing with these agencies, counsel children or parents in individual and small group sessions, and arrange for children to participate in "Big Brother" and "Big Sister" programs.

The degree to which these services differ from those provided out of local funds varies. Some districts provide no such service to non-Title I children; in others, the Title I services are highly concentrated supplements to a local program.

Parent Involvement

The goals of programs stressing parental involvement are to facilitate the work of Federally mandated Parent Advisory Councils and to encourage the participation of parents in the Title I program. Two general kinds of service components are typically funded: salaries of PAC coordinators (employees of the district who serve as a liaison with parents, organize workshops, serve as resource persons to PAC members, train parent volunteers, etc.), and expenses for PAC activities (travel, refreshments, babysitting, expenses for PAC meetings, per-diem expenses for attending regional and state conferences, special holiday events, field trips, workshops, and PAC newspapers).

Although services to parents also are offered through other auxiliary services, those provided in the parent involvement category are specifically intended to bring parents into the district decisionmaking process through participation in school- and

district-level Title I planning and evaluation. This contrasts with health education, counseling, social work, and even library services, which are provided to the parents on the assumption that they will indirectly improve the child's educational performance.

Parent involvement programs are open to all Title I parents. Some districts apparently provide these funds largely because district personnel believe special incentives are necessary to obtain sufficient parent participation to fulfill Federal requirements for a PAC at every Title I school. Other districts appear to have very active parent groups, and in these cases, the funds for PAC activities may have been included in the budget at the urging of the PAC. There appear to be no local- or state-funded equivalents to these programs emphasizing parent involvement in the decisionmaking process.

Miscellaneous Services

- Transportation--all but one of the transportation programs provided field trips for cultural or educational enrichment. The exception was a district that leased a car to transport children to its Title I diagnostic center.

- Speech therapy--these programs emphasize language development, screening to identify needs, therapy, or referral and placement.

- Food--in the case study districts, Title I now provides only two food programs, which pay for snacks for preschool classes.

- Other attendance services--only one case study district continues to use paraprofessionals from the local community who work with parents to get children back to school and to assist the Title I nurses in routine duties.

CHANGES OVER TIME

Overall, the case study districts report an average decline in the proportion of their Title I grant spent for auxiliary services, from approximately 9% in 1973-74 to 7% in 1976-77. Although this change represents only 2% of all Title I expenditures in these districts, it is a decline of more than 20% in the portion spent on auxiliary services. In some districts cutbacks have been more dramatic, with declines of as much as 80% of the number of students served.

Much of the decline is accounted for by the elimination of these services from the Title I budget. In some cases this represents a real cutback of services in the affected schools. In others, the services are continued with state or local funds, although Title I students cease to be the sole beneficiaries. Library services and guidance programs are the two services that have been dropped most frequently. The loss of a Title I library program represents a real service cutback in the affected schools, but this is not necessarily true for the guidance programs. Although in some places additional funds were not available to replace the Title I guidance service, often districts funded these services from local funds and permitted the counselors and psychologists to serve any child in need and not only Title I children.

Other services that have been eliminated in some of the case study districts are attendance services (which generally are not retained in local budgets), food services (which have all been taken over by the National School Lunch Program and the School Breakfast Program administered by the Department of Agriculture), health, and social work. The health and social work programs generally were continued with local funds, sometimes at a reduced level. Despite the overall decline, Title I social work services are still offered in most of the districts that provided them in the past.

Sometimes when auxiliary services are discontinued, vestiges of the old program remain, such as the practice of providing services during the summer when no local programs exist or serving nonpublic school students for whom no regular service is available. Another option for districts is to reduce the level of funding for a particular component without totally eliminating it. Faced with budget pressures, some districts try to maintain the level of services while serving fewer children, while others

continue to provide some minimal services to the same number of children. Others attempt to shift to lower paid personnel, such as paraprofessionals, to make it possible to serve more children for less money. No consistent patterns are evident in the data. The districts were very consistent, however, in stating that in trimming costs for any of the auxiliary services, funds for supplies and materials are cut first. Employees are retained as long as possible, usually until they leave the school system or find a locally funded position, at which time the Title I position is left open and the service dropped.

The one category of service that has clearly increased in these districts is parent involvement. In addition, many other Title I auxiliary services--such as health, guidance and psychology, or social work--now include services to parents or to families as an important part of their design. These parent services are generally not available to non-Title I parents through local or state funds.

The fact that funds for parent involvement services have been increasing, although the overall proportion of Title I spent for auxiliary services has declined in these 18 districts, underlines the shift in emphasis that has taken place and the extent to which the other services have been curtailed.

FACTORS AFFECTING DECISIONS TO PROVIDE AUXILIARY SERVICES

It is apparent from the case studies that several different factors influence the provision of auxiliary services. Generally, two factors are cited in support of district decisions to fund auxiliary services: local assessment of need and Federal emphasis on parent involvement. Four other factors generally explain decisions to reduce or eliminate services: the requirement that services be supplemental, renewed emphasis on basic skills, financial pressures, and program evaluations.

Local Assessment of Need

As the 1974 Senate Report makes clear, "local officials are charged with developing local solutions to meet their specific needs." In the case study districts, local needs assessments were important factors in the decision to provide auxiliary services.

NIE found several kinds of formal criteria used to determine needs for services in initiating new programs and justifying the continuation of ongoing projects. Several districts used statistical indicators of need: records of services provided in the recent past, numbers of children whose records show they have a particular problem, or numbers of referrals for a particular service. One district employs a private research organization to conduct a survey that is used for both needs assessment and evaluation purposes. Another makes use of a survey conducted by the United Way several years ago.[3]

In most case study districts, however, informal and subjective judgments, opinions, and experience with the needs of Title I children dominated the decision to provide auxiliary services. In some cases, the urging of parents, principals, or teachers convinced the administration of the need for certain auxiliary services.

In addition to serving as an impetus to provide auxiliary services, local needs assessments can also serve as the basis for decisions not to provide them. A few districts indicated that they had relatively little need for Title I auxiliary services, sometimes because their communities did not have pressing needs in these areas and sometimes because, although substantial needs existed, other sources of funds provided services.

Emphasis on Parent Advisory Councils

The increase in parental involvement expenditures results from the fact that several districts are now providing funds to establish or strengthen PACs. In discussing their reasons for devoting increased portions of their Title I budgets to parent involvement activities, districts cited new Federal requirements for school-level PACs (the 1974 Amendments and ensuing regulations). The National Survey finding that parent involvement services accounted for about one-third of all funds spent for auxiliary services in 1975-76 indicates that the Federal emphasis on parent involvement in the decisionmaking process has had an impact on the nature of the auxiliary services provided nationally.

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[3]No attempt has been made to determine absolute or relative needs for various services in these 18 districts, such as the level of health care available in the community. The case studies focused on the views of the various participants in the decisionmaking process and the kind of evidence and pressures they face in deciding how to allocate Title I funds.

The Requirement That the Program Be Supplemental

The major influence from the Federal level on districts' decisions about what, if any, auxiliary services to provide seems to be the requirement that services funded by Title I be demonstrably supplemental. Many of the case study districts have had to alter or eliminate auxiliary services because it was difficult to show that they were neither replacing services the children would otherwise be getting from local sources nor providing general assistance to all students.

In the case study districts the services most affected by this requirement are those that resemble programs usually provided by school districts--libraries, guidance, and health. For example, library services that consisted of additional personnel in the regular school library are no longer operating. Of all the auxiliary services, the only programs encountering no difficulty with this requirement were parent involvement programs.

Based on their interpretation of the legislation, OE repeatedly has maintained that "Title I of the Elementary and Secondary Education Act is an educational, not a welfare, program";[4] and, in its administration of the Title I program, OE has encouraged States to emphasize instructional programs. Virtually all districts are aware of this emphasis through their state Title I offices; only one district reported that its State encouraged, and indeed required, the provision of a broad range of auxiliary services.

States vary considerably in their interpretation of the Federal emphasis and have made different rules, formally and informally, that guide the districts in their program planning. Many respondents in the case study districts cited state emphasis on basic skills as the reason they limited their auxiliary services. Some state officials apparently assert that auxiliary services such as health or testing services are local or state responsibilities and therefore should not be funded through Title I, which in their view ought to provide instructional services.

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[4]Program Guide 60A, issued September 15, 1970, redesignated Program Instruction A710.1A. See also Title I ESEA: How It Works--A Guide For Parents and Parent Advisory Councils (OE-73-07104).

Financial Pressures

Respondents cited financial pressure as a principal factor in their decisions concerning which services to provide. Auxiliary services are usually considered to be a lower priority than instructional services and are nearly always cut back before reductions are made in the instructional program. In several cases, the total Title I budget had been reduced, or demands for Title I instruction had grown faster than the amount of money available, and some auxiliary services, therefore, were eliminated.

Program Evaluations

The evaluation of earlier programs influences the design of a Title I program at the local level. Most districts described their evaluations of auxiliary services as subjective or based on the opinions of various groups, such as parents, teachers, or principals. Many districts mentioned how difficult it is to measure quantitatively the effects of auxiliary services. One district mentioned transferring auxiliary services to state compensatory education programs, where evaluation requirements are less stringent.

Although evaluations of auxiliary services are difficult, some districts not only require quantitative assessments of services delivered, but also require evidence of their educational impact. One district evaluated auxiliary programs on the basis of achievement tests; it found that its speech therapy program was linked to increased scores on a language ability achievement test, and the program continued to be funded. It was difficult, however, to show such a link between the social work program and achievement scores, and that program was dropped. In another district a program consisting of reading and associated auxiliary services was discontinued because it did not produce a measurable improvement in the students' reading performance.

Even when districts used somewhat less quantitative criteria, some districts stopped programs when informal evaluations indicated they were not working as well as expected. In one district, for example, principals did not think that the attendance aides were improving attendance rates sufficiently; this program was discontinued.

In sum, the districts in the case studies generally found it difficult to quantify the effects of their support services on students; as a result auxiliary services were not provided or not continued in some places.

DISTRICT VIEWS

Most respondents in these studies were satisfied with their districts' decisions about the provision of auxiliary services. Although some districts expressed varying degrees of dissatisfaction when required to reduce their auxiliary services, the great majority indicated that even if they were to receive sizable increases in their Title I grant, they would not give first priority to expanding auxiliary services. All case study districts emphasized the priority of instructional goals in their programs, and most would stress improving or expanding their Title I instructional programs. The exceptions to this are districts that would reinstate auxiliary components lost in earlier budget squeezes and districts that would increase programs aimed at parent involvement or home/school relations.

Even case study respondents from districts providing no or very few auxiliary services believed this to be the best course of action, given their situation. Either they believed the other services available in the school and community to be sufficient, or they believed that schools should fulfill instructional goals before beginning to provide any auxiliary services. Some expressed the opinion that the responsibilities for such programs ought to be borne by state or local government.

Although most respondents were reasonably satisfied with the design and implementation of the auxiliary service program in the districts, several reported some dissatisfaction that low-achieving children who did not attend a Title I school were not eligible to receive special auxiliary services. This perceived lack of fairness has been a source of dissatisfaction with Title I in some communities, according to the respondents.

It appears that the types of auxiliary service most likely to be maintained as part of the Title I program are those that involve parents of Title I children. In addition to specific parent involvement services, many other programs (health, guidance, social

work, and even one library program) have important parent components in them that emphasize parent education and home/school cooperation, on the assumption that such emphasis will help improve the children's educational performance.

APPENDIX A. SECTIONS 821 AND 150
OF PUBLIC LAW 93-380

Public Law 93-380
93rd Congress, H. R. 69
August 21, 1974

An Act

To extend and amend the Elementary and Secondary Education Act of 1965, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Education Amendments of 1974".

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Part B—Educational Studies and Surveys

STUDY OF PURPOSES AND EFFECTIVENESS OF COMPENSATORY EDUCATION PROGRAMS

SEC. 821. (a) In addition to the other authorities, responsibilities and duties conferred upon the National Institute of Education (hereinafter referred to as the "Institute") by section 405 of the General Education Provisions Act and notwithstanding the second sentence of subsection (b)(1) of such section 405, the Institute shall undertake a thorough evaluation and study of compensatory education programs, including such programs conducted by States and such programs conducted under title I of the Elementary and Secondary Education Act of 1965. Such study shall include—

(1) an examination of the fundamental purposes of such programs, and the effectiveness of such programs in attaining such purposes;

(2) an analysis of means to identify accurately the children who have the greatest need for such programs, in keeping with the fundamental purposes thereof;

(3) an analysis of the effectiveness of methods and procedures for meeting the educational needs of children, including the use of individualized written educational plans for children, and programs for training the teachers of children;

(4) an exploration of alternative methods, including the use of procedures to assess educational disadvantage, for distributing funds under such programs to States, to State educational agencies, and to local educational agencies in an equitable and efficient manner, which will accurately reflect current conditions and insure that such funds reach the areas of greatest current need and are effectively used for such areas;

(5) not more than 20 experimental programs, which shall be reasonably geographically representative, to be administered by the Institute, in cases where the Institute determines that such experimental programs are necessary to carry out the purposes of clauses (1) through (4), and the Commissioner of Education is authorized, notwithstanding any provision of title I of the Elementary and Secondary Education Act of 1965, at the request of the Institute, to approve the use of grants which educational agencies are eligible to receive under such title I (in cases where the agency eligible for such grant agrees to such use) in order to carry out such experimental programs; and

(6) findings and recommendations, including recommendations for changes in such title I or for new legislation, with respect to the matters studied under clauses (1) through (5).

(b) The National Advisory Council on the Education of Disadvantaged Children shall advise the Institute with respect to the design and execution of such study. The Commissioner of Education shall obtain and transmit to the Institute such information as it shall request with respect to programs carried on under title I of the Act.

(c) The Institute shall make an interim report to the President and to the Congress not later than December 31, 1976, and shall make a final report thereto no later than nine months after the date of submission of such interim report, on the result of its study conducted under this section. Any other provision of law, rule, or regulation to the contrary notwithstanding, such reports shall not be submitted to any review outside of the Institute before their transmittal to the Congress, but the President and the Commissioner of Education may make to the Congress such recommendations with respect to the contents of the reports as each may deem appropriate.

(d) Sums made available pursuant to section 151(i) of the Elementary and Secondary Education Act of 1965 shall be available to carry out the provisions of this section.

(e)(1) The Institute shall submit to the Congress, within one hundred and twenty days after the date of the enactment of this Act, a plan for its study to be conducted under this section. The Institute shall have such plan delivered to both Houses on the same day and to each House while it is in session. The Institute shall not commence such study until the first day after the close of the first period of thirty calendar days of continuous session of Congress after the date of the delivery of such plan to the Congress.

(2) For purposes of paragraph (1)—

(A) continuity of session is broken only by an adjournment of Congress sine die; and

(B) the days on which either House is not in session because of an adjournment of more than three days to a day certain are excluded in the computation of the thirty-day period.

*****

"ALLOCATION OF FUNDS WITHIN THE SCHOOL DISTRICT OF A LOCAL EDUCATIONAL AGENCY

"SEC. 150. (a) For any fiscal year not more than 20 local educational agencies selected for the purpose of section 821(a)(5) of the Education Amendments of 1974 may elect, with the approval of the district-wide parent advisory council which is required to be established under section 141(a)(14) of this title, to allocate funds received from payments under this title on the basis of a method or combination of methods other than the method provided under section 141(a)(1)(A). Any method selected pursuant to this section shall be so designed and administered as to be free from racial or cultural discrimination.

"(b) Any local educational agency to which this section applies shall submit such reports to the Director of the National Institute of Education at such time and in such manner as the Director may reasonably require to carry out his responsibilities under section 821(a)(5) of the Education Amendments of 1974.

APPENDIX B. COMPENSATORY EDUCATION INSTRUCTION--TIME AND TEACHERS

TABLE B-1

PERCENT OF AVAILABLE INSTRUCTIONAL TIME DEVOTED TO COMPENSATORY EDUCATION BY CE STUDENTS IN GRADES K-8

Grade	Percent of Time
K	18.28
1	21.50
2	22.23
3	21.82
4	25.05
5	23.27
6	20.81
7	16.02
8	16.20

TABLE B-2

COMPENSATORY SUBJECTS TAUGHT BY CE TEACHERS

	Percent of CE Teachers*	Standard Error
Remedial reading	43.82	2.60
Mathematics	31.87	3.88
Language arts/communication skills	30.32	4.06
Preschool/kindergarten readiness activities	16.96	2.13
General enrichment	14.31	2.46
Follow Through program	9.32	2.16
Special education/learning disabilities	8.76	2.39
Social/cultural studies	5.91	1.37
Health and/or nutrition instruction	5.27	1.47
Music/art	4.94	1.35
Science	3.70	1.14
English as a second language	2.76	0.77
Special instructional program for dropouts	0.65	0.44
Industrial arts/home economics	0.23	0.10
Other	3.24	0.65

*Percentages do not sum to 100 because compensatory education teachers may teach more than one subject.

TABLE B-3

PERCENT OF CE STUDENTS MISSING INSTRUCTION, BY SUBJECT, DURING PARTICIPATION IN COMPENSATORY INSTRUCTION

	Reading	Language Arts	Mathematics
Reading	11.4	5.6	3.0
Language arts/communication skills	10.5	10.0	6.6
Mathematics	5.9	7.1	9.0
Social studies	15.9	8.4	10.0
Science	13.9	11.8	10.6
Music	5.8	9.1	7.3
Art	6.8	9.5	7.3
Industrial art/home economics	2.6	5.6	4.6
Physical education	4.7	3.9	4.1
Study time	15.8	12.1	10.2
Other	9.7	7.1	6.0
No subjects missed	42.8	54.9	54.1

TABLE B-4

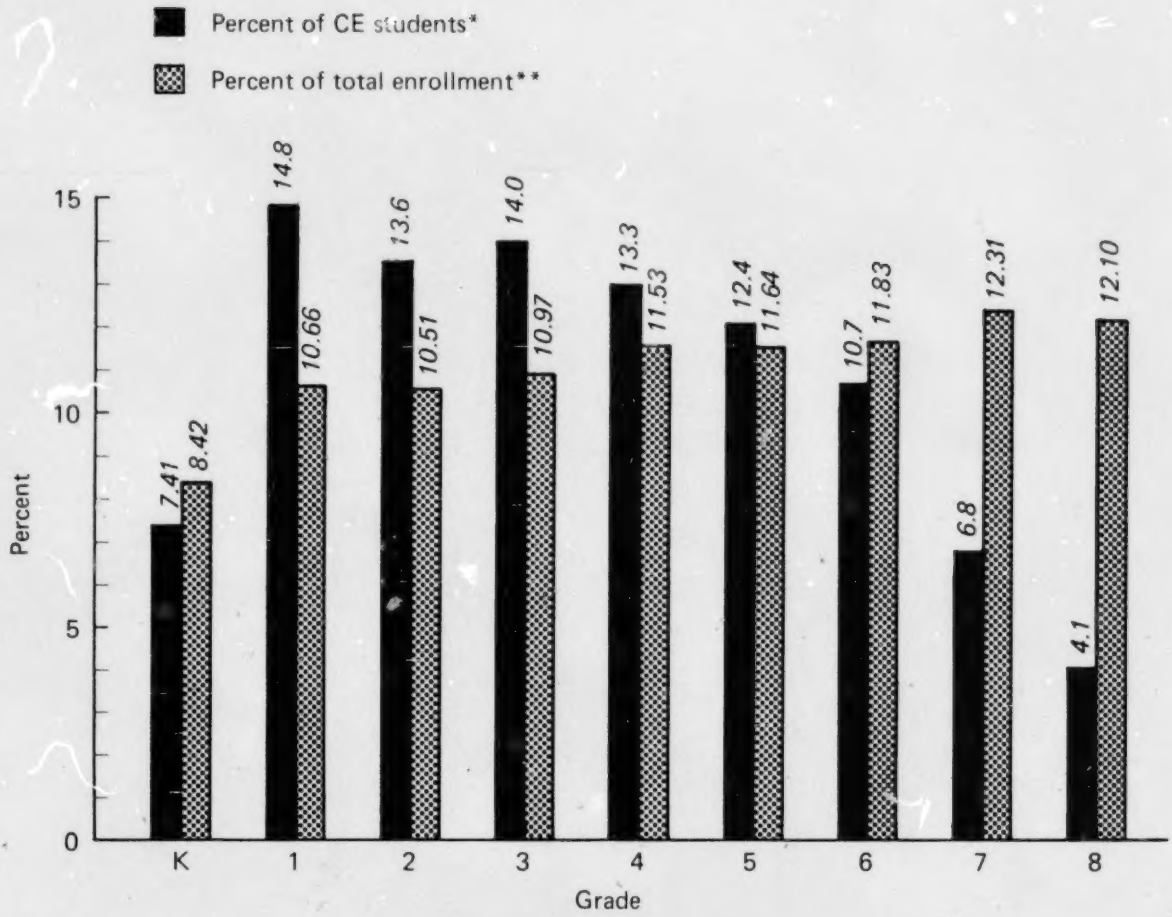
QUALIFICATIONS OF CLASSROOM TEACHERS IN THE DEMONSTRATION DISTRICTS

		Level of Education		Employment Status	
District	Years of Teaching Experience (Mean)	Bachelor's or Less (Percent)	Master's or More (Percent)	Full Time Tenured (Percent)	Full Time Nontenured (Percent)
1	9.5	3.2	14.5	69.4	27.4
2	13.3	7.2	20.3	84.5	5.6
3	11.0	18.2	16.4	74.1	22.2
4	10.6	13.0	48.7	80.9	4.9
5	12.8	41.4	13.2	80.5	18.3
6	8.9	21.6	20.3	70.3	29.7
7	13.6	33.9	31.6	83.4	14.7
8	13.3	1.1	60.9	83.9	14.9
9	11.5	18.8	15.2	79.5	16.1
10	13.9	6.9	27.8	81.9	16.7
11	13.7	40.6	22.8	85.7	10.3
12	10.5	8.6	58.5	87.1	11.4
Median	12.2	15.6	21.6	81.4	15.5

TABLE B-5

QUALIFICATIONS OF INSTRUCTIONAL SPECIALISTS
IN THE DEMONSTRATION DISTRICTS

District	Years of Teaching Experience (Mean)	Level of Education		Employment Status	
		Bachelor's or Less (Percent)	Master's or More (Percent)	Full Time Tenured (Percent)	Full Time Nontenured (Percent)
1	12.1	0.0	50.0	62.5	37.5
2	17.8	0.0	81.8	100.0	0.0
3	7.6	28.6	28.6	57.1	42.9
4	10.7	14.5	55.9	86.2	3.9
5	10.8	27.3	26.6	44.4	50.8
6	10.6	5.3	36.9	63.2	36.8
7	11.0	25.8	42.3	58.3	30.4
8	10.0	0.0	78.5	100.0	0.0
9	9.1	5.6	27.8	62.5	37.5
10	11.6	0.0	100.0	40.0	60.0
11	14.4	7.4	44.4	70.4	29.6
12	13.7	0.0	93.7	100.0	0.0
Median	10.9	5.5	47.2	62.9	33.6



Standard Error	1.0	1.3	.8	1.0	.7	.7	1.0	1.8	.8

*1975–1976 NIE Survey data.
**1973–1974 total enrollment from *Digest of Educational Statistics: 1974 Edition*, NCES.

FIGURE B-1. PERCENT OF CE STUDENTS AND TOTAL ENROLLMENT IN EACH GRADE, K-8

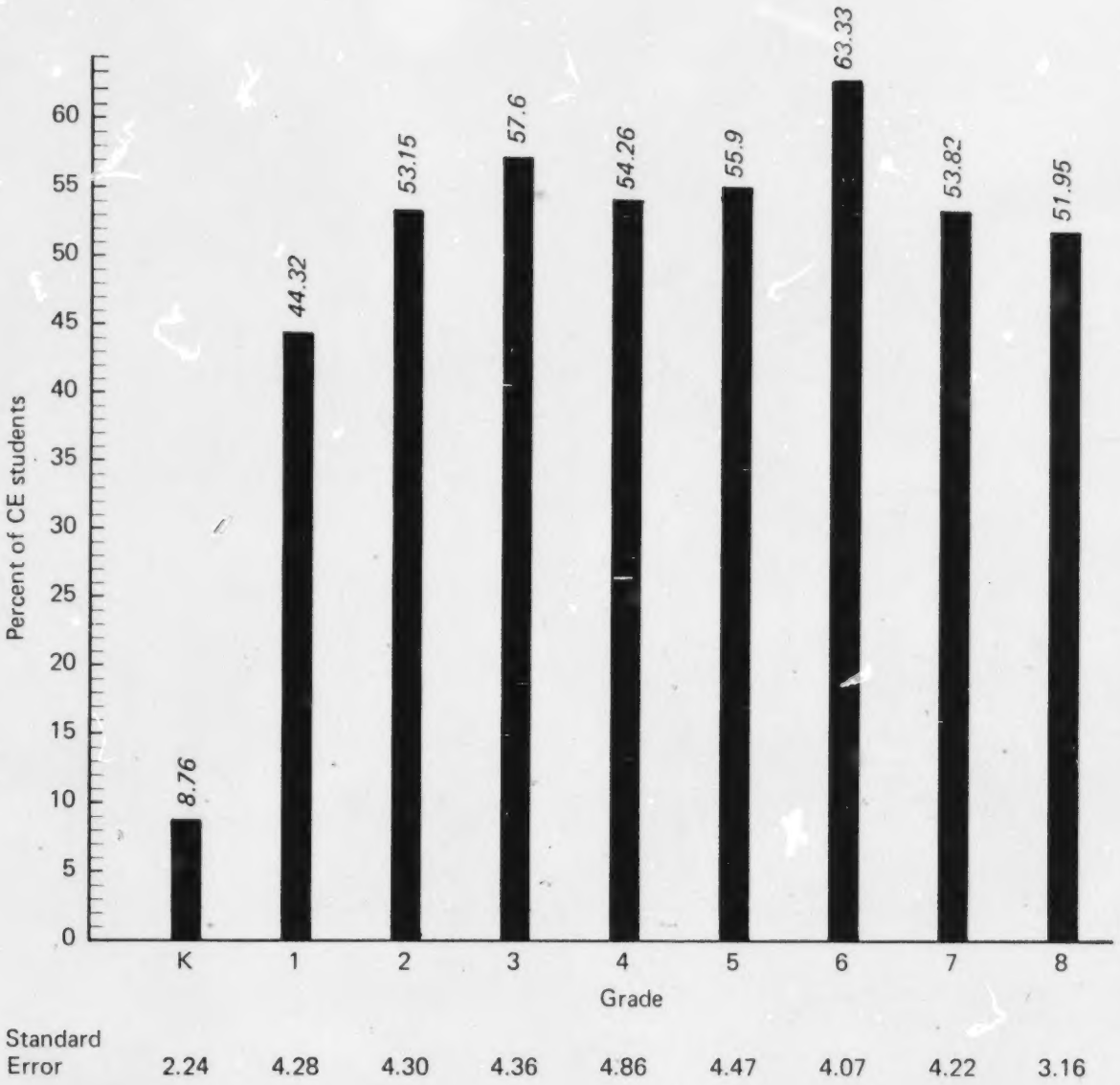


FIGURE B-2. PERCENT OF CE STUDENTS RECEIVING COMPENSATORY READING IN EACH GRADE

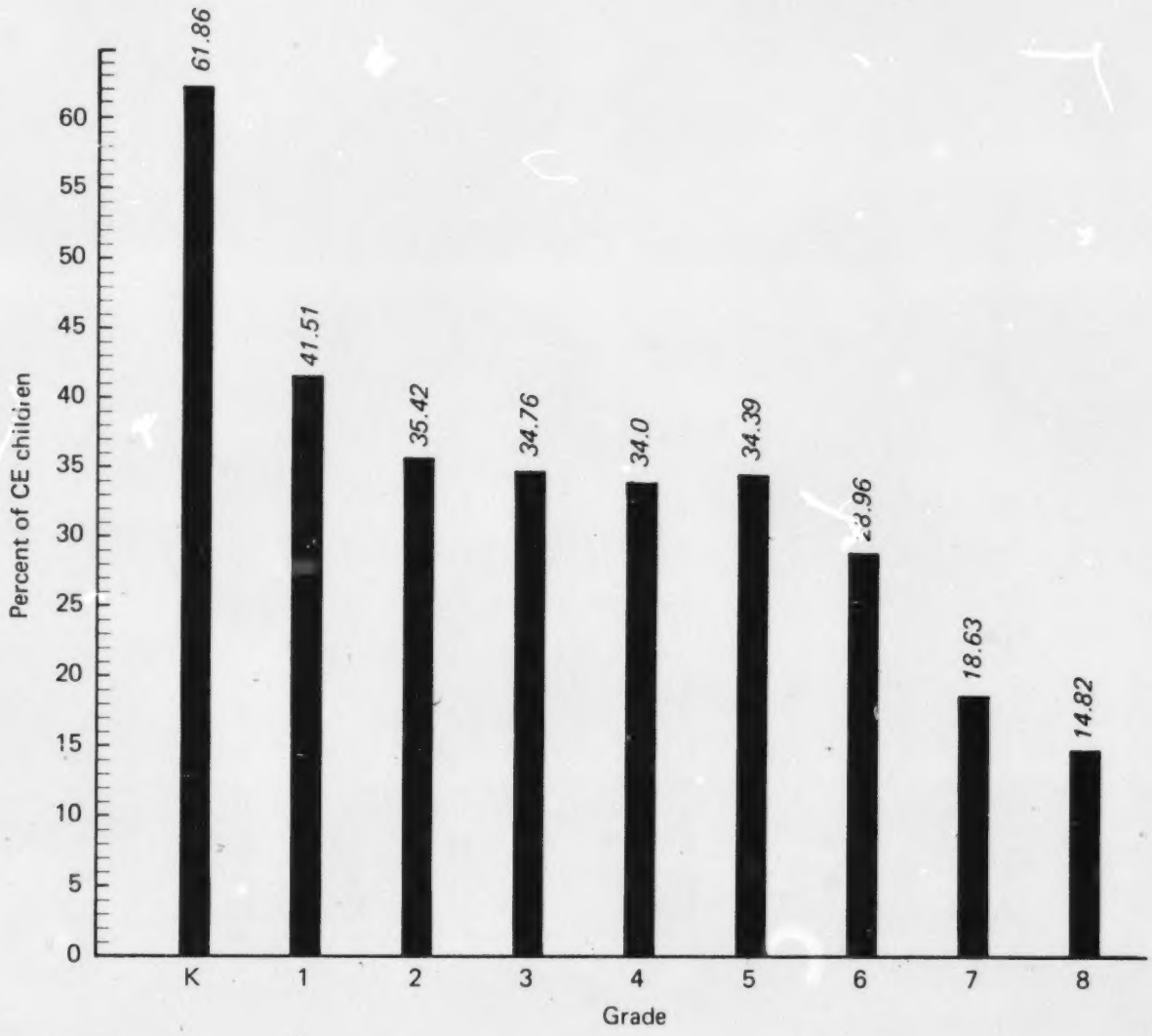
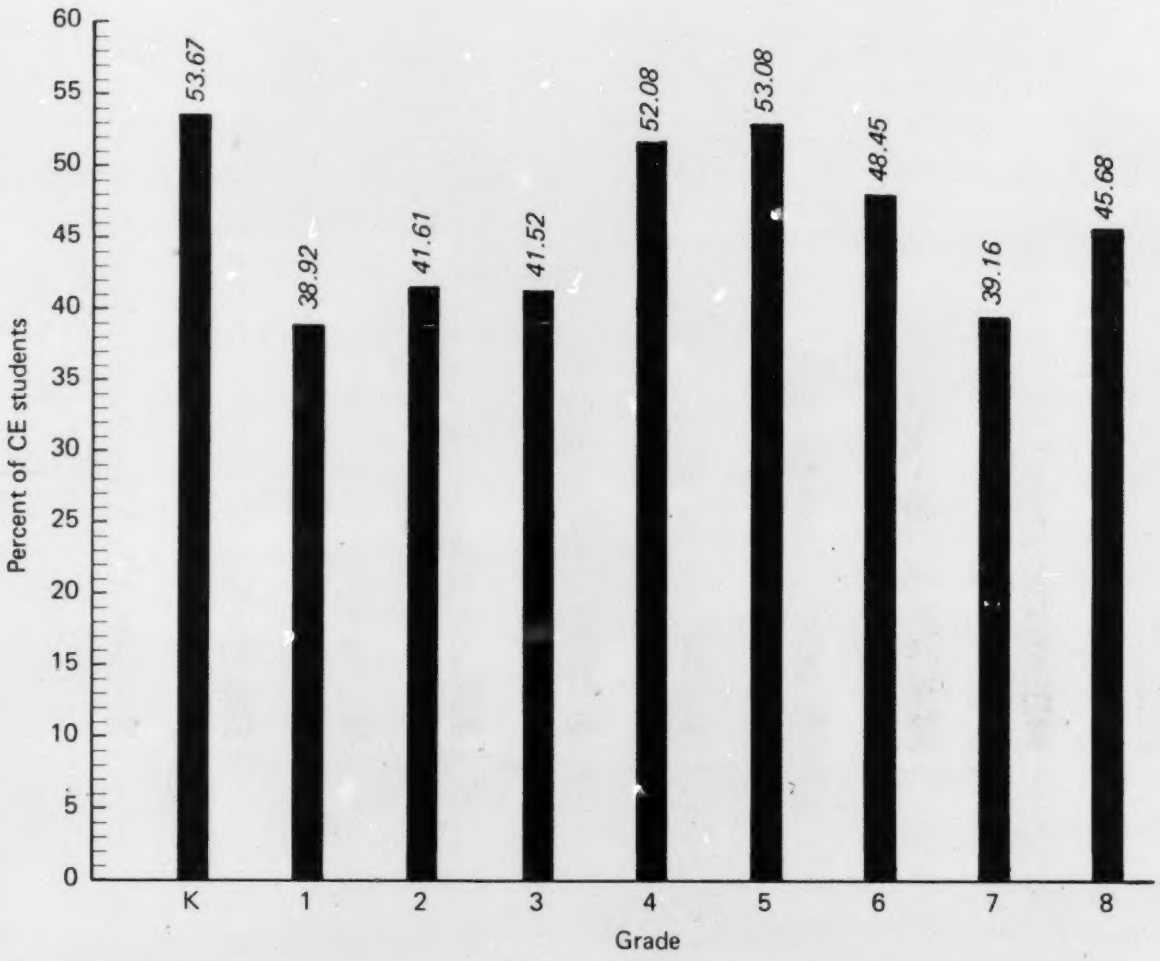


FIGURE B-3. PERCENT OF CE STUDENTS RECEIVING COMPENSATORY LANGUAGE ARTS INSTRUCTION IN EACH GRADE



Standard Error	7.65	6.42	5.01	5.15	5.65	5.33	5.39	8.25	9.89

FIGURE B-4. PERCENT OF CE STUDENTS RECEIVING COMPENSATORY MATHEMATICS IN EACH GRADE

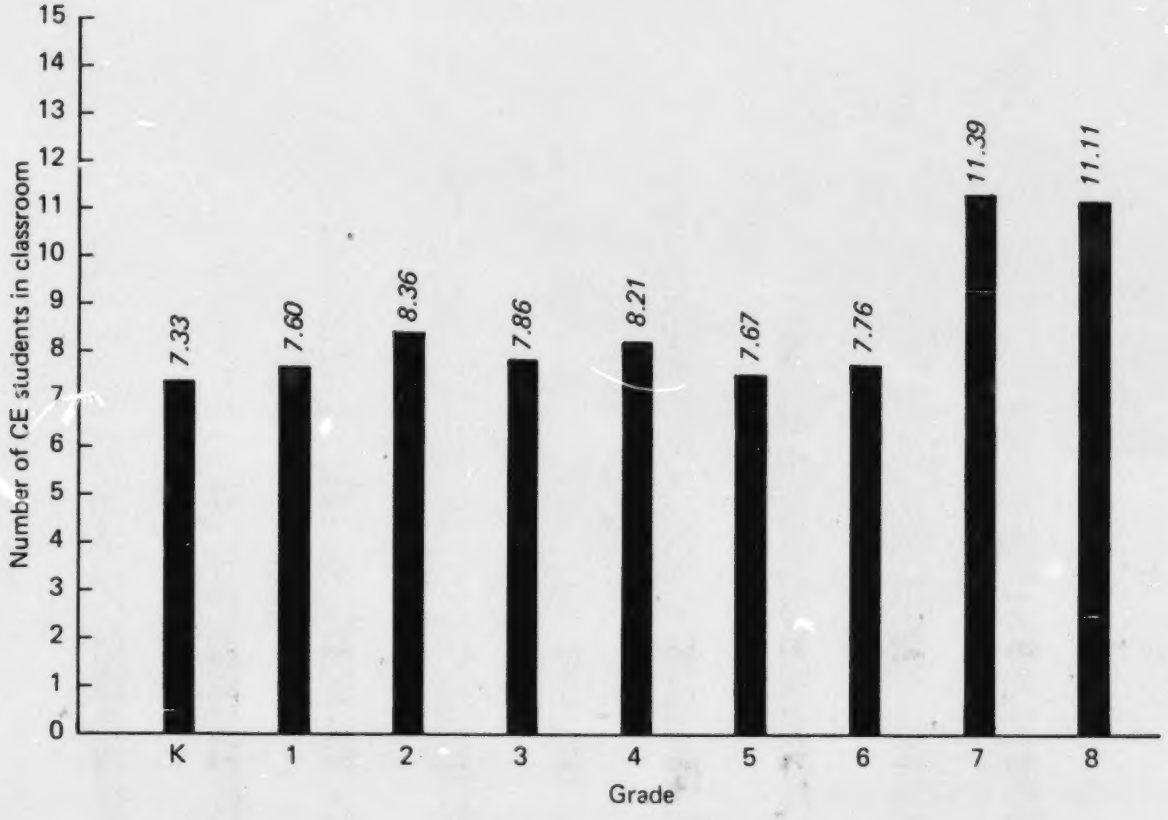


FIGURE B-5. AVERAGE CLASS SIZE FOR COMPENSATORY READING INSTRUCTION

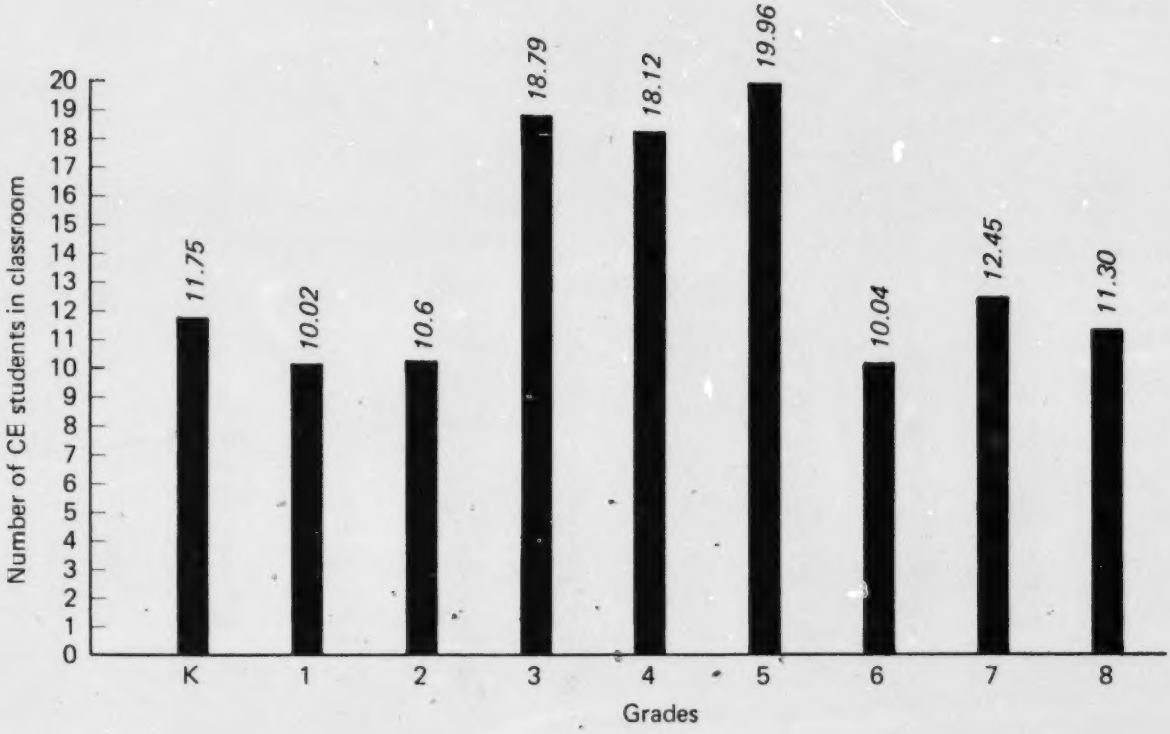


FIGURE B-6. AVERAGE CLASS SIZE FOR COMPENSATORY LANGUAGE ARTS INSTRUCTION

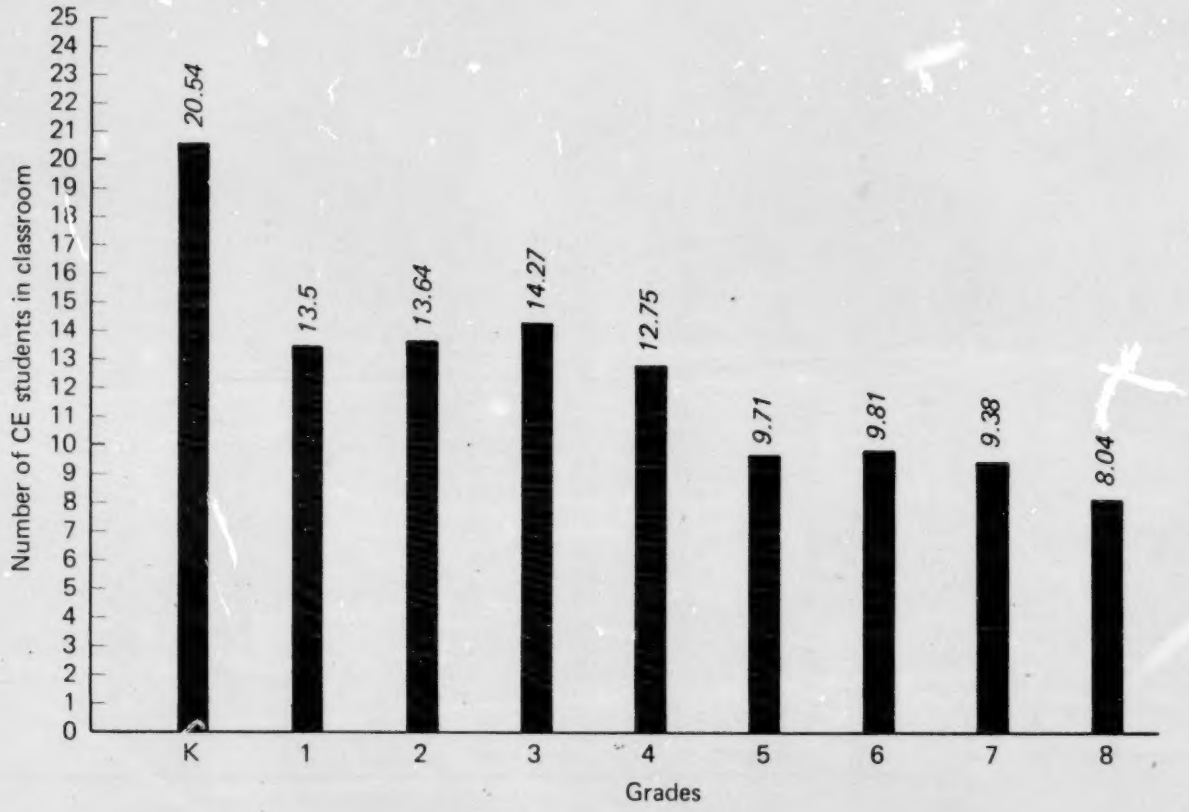
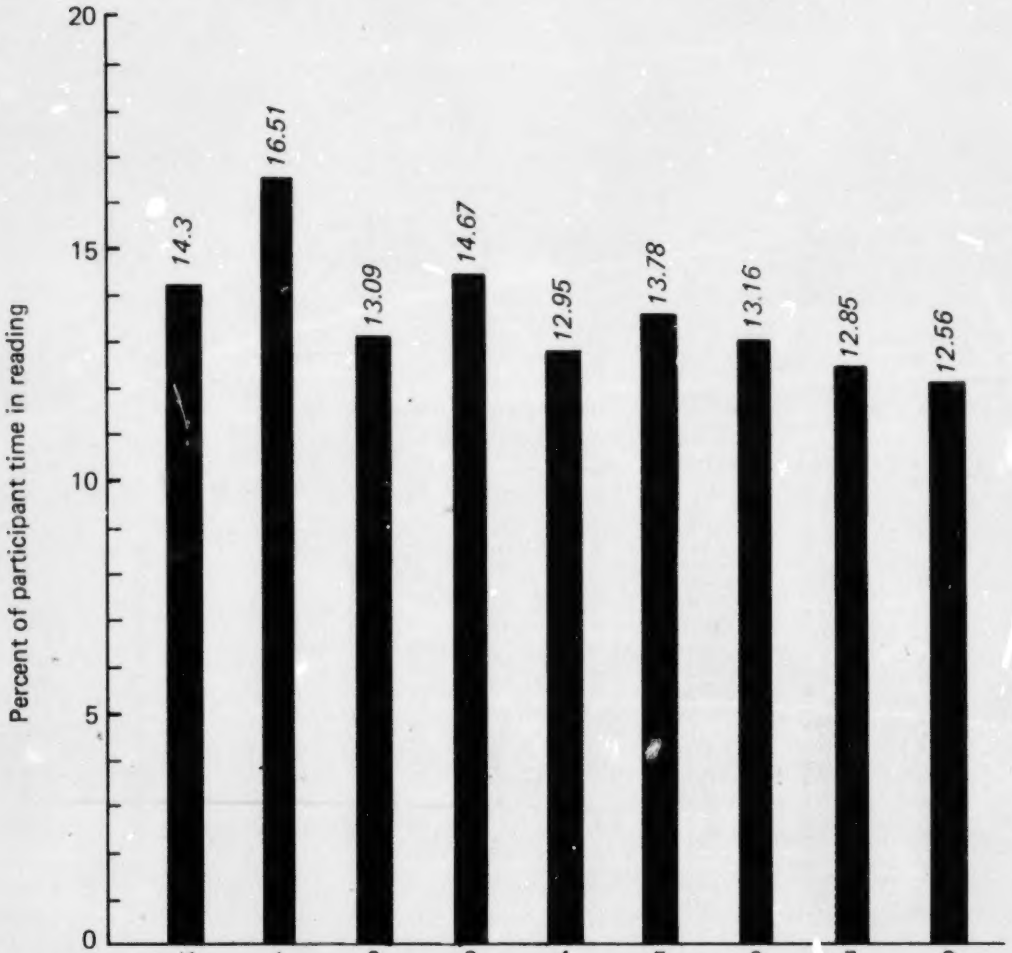
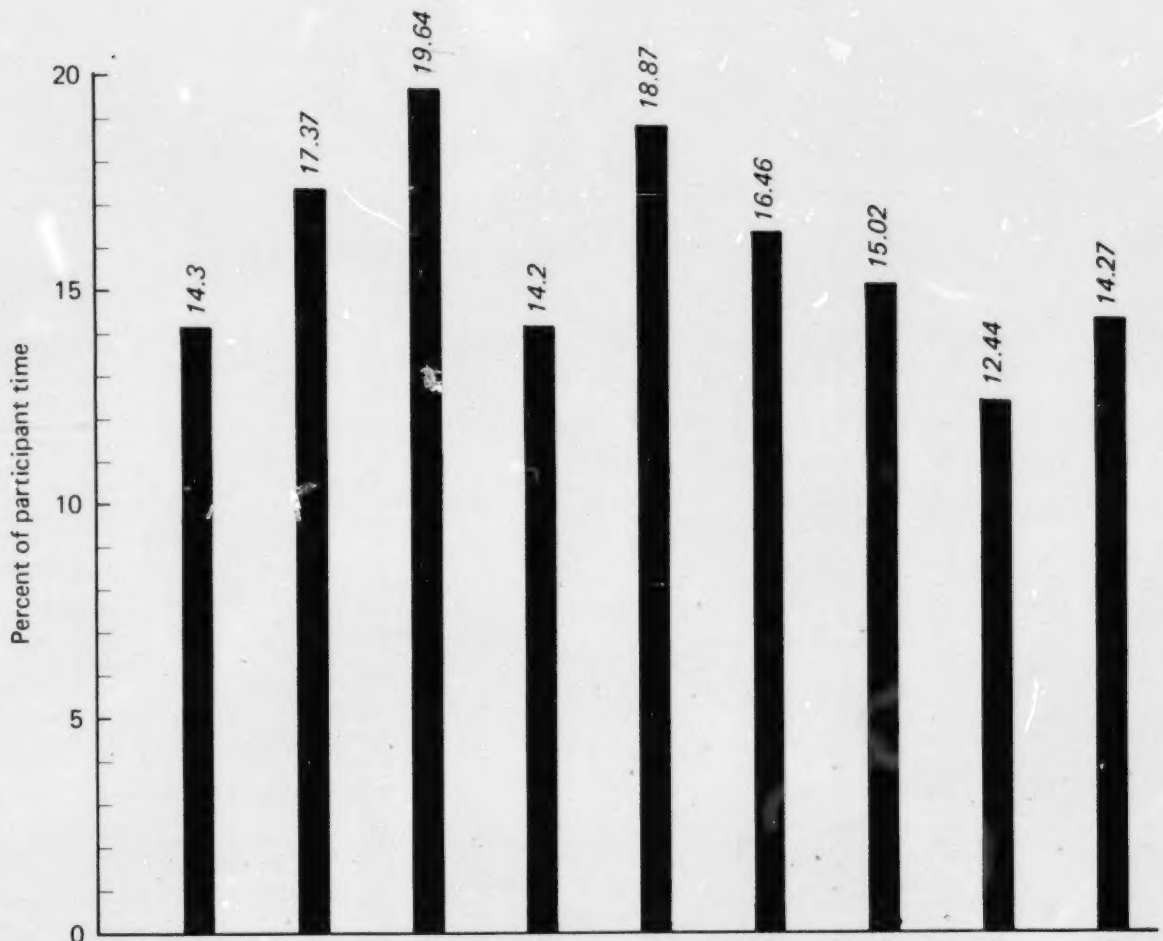


FIGURE B-7. AVERAGE CLASS SIZE FOR COMPENSATORY MATHEMATICS INSTRUCTION



	K	1	2	3	4	5	6	7	8
Standard Error	4.67	1.53	.82	.96	.91	.70	.89	.67	.83

FIGURE B-8. PERCENT OF INSTRUCTIONAL TIME DEVOTED TO COMPENSATORY READING INSTRUCTION



Standard Error	2.33	1.75	2.49	1.58	1.91	1.77	1.25	1.54	1.42

FIGURE B-9. PERCENT OF INSTRUCTIONAL TIME DEVOTED TO COMPENSATORY LANGUAGE ARTS INSTRUCTION

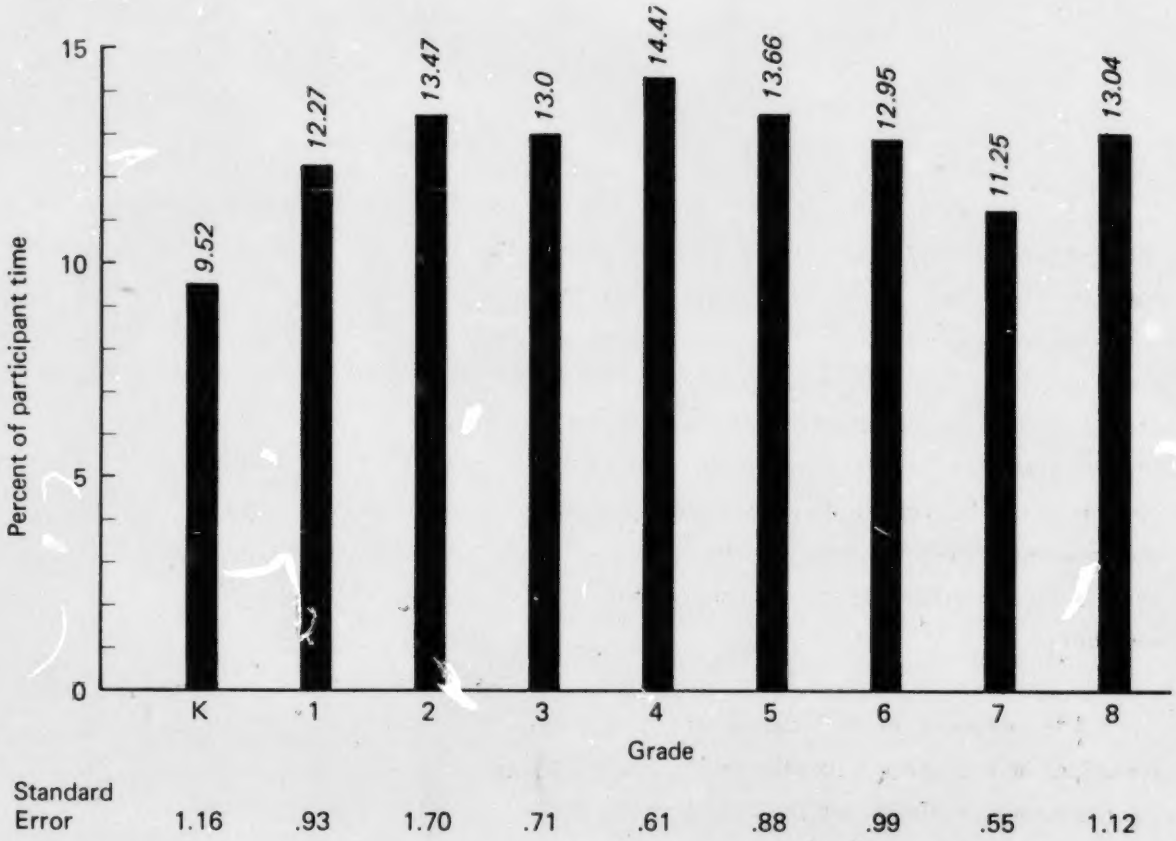


FIGURE B-10. PERCENT OF INSTRUCTIONAL TIME DEVOTED TO COMPENSATORY MATHEMATICS INSTRUCTION

APPENDIX C. EXPENDITURES AND SERVICES

The following tables present the results of regression analyses of the relationships between Title I expenditures, staffing, and service delivery. To investigate these relationships, four types of compensatory instruction were analyzed separately: remedial reading, language arts, mathematics, and other instructional areas. Because some districts offer only reading, while others offer a variety of services, the analysis presented here should be viewed as depicting average relationships. The results do not reflect the pattern for every Title I district due to differences in the way they operate. The R^2 reported in the tables represents the proportion of variance in NIE's outcome measures (for example, the number of students receiving reading instruction) that is accounted for by differences in the level of expenditures or number of staff members.

The numbers in the tables are the coefficients in the resulting regression equations and can be interpreted as the amount of change in a variable being analyzed, in this case the number of students served, that is associated with an increase in the level of expenditures or the number of staff members.

The results in Table C-1 indicate the strong relationship between Title I expenditures and the number of students served. In addition, they suggest that, for every $10,000 of total Title I expenditures, districts provide compensatory reading instruction to an average of six students. Generally, the number of students served per $10,000 of total expenditures is similar for language arts and mathematics. On the other hand, when districts offer compensatory instruction in other subject areas, they serve approximately 7.5 students for every $10,000 of Title I expenditures.

TABLE C-1

AVERAGE NUMBER OF CE STUDENTS RECEIVING COMPENSATORY INSTRUCTION, BY SUBJECT, PER $10,000 IN TITLE I EXPENDITURES

	Per $10,000	R^2
CE reading	6.1	.84
CE language arts	6.1	.80
CE mathematics	6.2	.67
CE instruction in other areas	7.5	.73

It should be stressed that these results depict average relationships and do not reflect the pattern for every Title I district. The relationship being analyzed is between total Title I spending and the number of students in particular subject areas, not between expenditures for reading and level of participation in reading. Obviously, districts offering only reading instruction might be able to serve more students for a given level of expenditures. Nevertheless, the fact that total expenditures account for 84% of the variation in reading services shows that these results do provide a good indication of the general relationship between expenditures and services.

The results in Table C-2 indicate that the number of students served for a given level of Title I expenditures is smaller for pullout programs than for compensatory instruction generally. For example, in compensatory mathematics instruction, districts generally serve an average of six students for $10,000 in total Title I expenditures, but only two students for the same amount of funds when the mathematics instruction is provided in a separate location.

TABLE C-2

AVERAGE NUMBER OF CE STUDENTS RECEIVING INSTRUCTION IN PULLOUT PROGRAMS, BY SUBJECT, PER $10,000 IN TITLE I EXPENDITURES

	Per $10,000	R^2
Pullout reading	4.0	.89
Pullout language arts	1.7	.48
Pullout mathematics	2.0	.52
Pullout in other areas	1.9	.45

EXPENDITURES AND STAFF

Table C-3 presents the results of the analysis of the relationship between Federal expenditures and staff. The results show the extent to which the number of staff hired is a function of the level of expenditures. The results also indicate that Title I and other Federal expenditures have a joint effect on the variation in the number of compensatory education teachers who are hired with bachelor's degrees plus courses or with master's degrees. In contrast, variations in Title I alone account for most of the differences among districts in the number of teachers with bachelor's degrees or less or in the number of teachers' aides who are hired. NIE's initial expenditure analyses indicate a strong joint effect of Title I and other Federal program expenditures on variations both in staff and in level of compensatory services in different instructional areas. Due to the high correlation between the distribution of Title I and other Federal expenditures, further analyses are currently underway to measure this relationship more precisely.

TABLE C-3

AVERAGE NUMBER OF CE STAFF PER $100,000 IN FEDERAL EXPENDITURES

	From Title I	From Other Federal Programs	R^2
Teachers with bachelor's degree or less	.7	0	.88
Teachers with bachelor's degree plus courses	.2	.6	.96
Teachers with master's degree or more	.3	.4	.84
Teachers' aides	.3	-.05	.87

STAFF AND SERVICES

Tables C-4 to C-9 present the complete results of regression analyses of the relationship between numbers of staff and level of compensatory services: number of students served, number of students in pullout programs, and amount of time in compensatory instruction. As previously indicated, the numbers in the tables are the coefficients in the resulting regression equations. For each subject area, positive numbers in the tables indicate that districts hiring more than the average number of staff of that type also serve more than the average number of students in that area. The zeros indicate that, on average, the number of students receiving the instruction is not related to the number of teachers of that type hired by a district. Negative numbers basically indicate that districts do not use a given type of staff in that instructional area. Thus, districts hiring that type of staff serve fewer than the average number of students in that subject area.

TABLE C-4

AVERAGE NUMBER OF CE STUDENTS RECEIVING INSTRUCTION, BY SUBJECT, PER CATEGORY OF CE STAFF

	Reading	Language Arts	Mathematics	Other Areas
CE teachers with bachelor's degree or less	-26	55	-15	0
CE teachers with bachelor's degree plus courses	40	26	60	72
CE teachers with master's degree or more	27	0	22	-21
Teachers' aides	27	-32	-66	0
R^2	.96	.94	.94	.93

TABLE C-5

AVERAGE NUMBER OF CE STUDENTS IN PULLOUT PROGRAMS, BY SUBJECT, PER CATEGORY OF CE STAFF

	Reading	Language Arts	Mathematics	Other Areas
CE teachers with bachelor's degree or less	9	28	-10	-22
CE teachers with bachelor's degree plus courses	0	0	11	36
CE teachers with master's degree or more	16	13	27	5
Teachers' aides	59	-24	-40	-46
R^2	.91	.63	.87	.85

Districts do not hire teachers on the basis of the amount of instructional time required per pupil. They do, however, have to provide so many hours of instruction per week, given a certain number of teachers. By using a summary measure of total compensatory instructional time at the district level, NIE was able to investigate the relationship between compensatory education time and district-level staff decisions. Tables C-6 through C-9 present these relationships.

TABLE C-6

AVERAGE DISTRICT COMPENSATORY INSTRUCTIONAL TIME*
IN READING, PER CATEGORY OF CE STAFF

	Pullout Reading	Mainstream Reading
CE teachers with bachelor's degree or less	1.7	-7.4
CE teachers with bachelor's degree plus courses	0	8.0
CE teachers with master's degree or more	1.8	1.8
Teachers' aides	7.4	-6.5
R^2	.91	.86

*The measure of time used in these analyses was calculated at the district level to estimate the total amount of compensatory instruction time provided to compensatory education students receiving the instruction in a particular subject area. This measure, which takes into account existing differences in overall length of instructional time between districts, represents the full-time equivalent of compensatory education students per week. The following example shows how this measure was constructed. A school has 100 students in its compensatory reading program, and each student receives this instruction for 5 hours a week, which is 20% of the total instructional time available. At the district level, this time is equivalent to providing 20 students with instruction for the entire week (100 x .20).

TABLE C-7

AVERAGE DISTRICT COMPENSATORY INSTRUCTIONAL TIME IN LANGUAGE ARTS, PER CATEGORY OF CE STAFF

	Pullout Language Arts	Mainstream Language Arts
CE teachers with bachelor's degree or less	5.3	10.8
CE teachers with bachelor's degree plus courses	0	6.5
CE teachers with master's degree or more	1.6	-3.7
Teachers' aides	-4.6	0
R^2	.68	.93

TABLE C-8

AVERAGE DISTRICT COMPENSATORY INSTRUCTIONAL TIME IN MATHEMATICS, PER CATEGORY OF CE STAFF

	Pullout Mathematics	Mainstream Mathematics
CE teachers with bachelor's degree or less	0	0
CE teachers with bachelor's degree plus courses	7.9	6.7
CE teachers with master's degree or more	3.1	-1.0
Teachers' aides	-3.3	-2.7
R^2	.83	.95

TABLE C-9

AVERAGE DISTRICT COMPENSATORY INSTRUCTIONAL TIME IN OTHER SUBJECT AREAS, PER CATEGORY OF CE STAFF

	Pullout in Other Areas	Mainstream in Other Areas
CE teachers with bachelor's degree or less	-2.3	7.3
CE teachers with bachelor's degree plus courses	4.2	11.0
CE teachers with master's degree or more	0	-5.0
Teachers' aides	-4.3	0
R^2	.84	.92

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